This document provides pertinent information concerning the reissuance of the VPDES Permit listed below. This permit is being processed as a minor, municipal permit. The discharge results from the operation of a 0.040 MGD wastewater treatment plant. This permit action consists of updating the proposed effluent limits to reflect the current Virginia Water Quality Standards (effective 6 January 2011) and updating permit language as appropriate. The effluent limitations and special conditions contained within this permit will maintain the Water Quality Standards of 9VAC25-260 et seq.

1.	Facility Name and Mailing Address:	Six-0-Five Mobile Home Park P.O. Box 70367 Richmond, VA 23255	SIC Code:	4952 WWTP
	Facility Location:	Off Route 605, 0.3 miles NE of US 33	County:	Louisa
	Facility Contact Name:	Michael Cook / Operator	Telephone Number:	804-994-2088
	Facility Email Address:	maushaus@bealenet.com		
2.	Permit No.:	VA0090140	Expiration Date:	24 May 2014
	Other VPDES Permits:	Not Applicable		
	Other Permits:	PWSID 2109675 – Public water supply		
	E2/E3/E4 Status:	Not Applicable		
3.	Owner Name:	Six-0-Five Mobile Home Group LLC		
	Owner Contact / Title:	James Benson / Managing Partner	Telephone Number:	804-741-0234
	Owner Email Address:	jimmyb2@cavtel.net		
4.	Application Complete Date:	24 January 2014		
	Permit Drafted By:	Douglas Frasier	Date Drafted:	25 February 2014
	Draft Permit Reviewed By:	Anna Westernik	Date Reviewed:	27 February 2014
	Public Comment Period:	Start Date: 14 March 2014	End Date:	14 April 2014
5.	Receiving Waters Information:	See **Attachment 1** for the Flow Frequency Determination.		
	Receiving Stream Name:	South Anna River, UT	Stream Code:	8-XDR
	Drainage Area at Outfall:	< 1 square mile	River Mile:	3.6
	Stream Basin:	York River	Subbasin:	None
	Section:	3	Stream Class:	III
	Special Standards:	None	Waterbody ID:	VAN-F03R
	7Q10 Low Flow:	0.003 MGD*	7Q10 High Flow:	0.054 MGD*
	1Q10 Low Flow:	0.003 MGD*	1Q10 High Flow:	0.043 MGD*
	30Q10 Low Flow:	0.003 MGD*	30Q10 High Flow:	0.043 MGD*
	Harmonic Mean Flow:	0.061 MGD*	30Q5 Flow:	0.014 MGD*

*The immediate receiving stream has critical flows of 0.0 MGD; however, the stream becomes perennial less than a mile from the discharge point. Staff utilized the perennial stream critical flow information as stated in **Attachment 1** during the wasteload allocation analysis.
Please note: both high and low critical 30Q10 flows were equated to the respective 1Q10 flows for this analysis since this information was not available.

6. Statutory or Regulatory Basis for Special Conditions and Effluent Limitations:

X	State Water Control Law	X	EPA Guidelines
X	Clean Water Act	X	Water Quality Standards
X	VPDES Permit Regulation		Other:
X	EPA NPDES Regulation		

7. Licensed Operator Requirements: Class III

8. Reliability Class: Class II

9. Facility / Permit Characterization:

X	Private	X	Effluent Limited		Possible Interstate Effect
	Federal	X	Water Quality Limited		Compliance Schedule
	State		Whole Effluent Toxicity Program		Interim Limits in Permit
	POTW		Pretreatment Program		Interim Limits in Other Document
	eDMR Participant	X	Total Maximum Daily Load (TMDL)		

10. Wastewater Sources and Treatment Description:

This facility is a privately owned treatment works with a design flow of 0.040 MGD, serving 104 units with a population of approximately 201 residents.

The facility consists of an above ground sequencing batch reactor (SBR) package plant. Treatment units consist of influent pumping, preliminary screening, equalization tank, SBR unit, tertiary mixed media filtration and post aeration prior to disinfection via ultraviolet (UV) radiation. The outfall is shore based, discharging to a small unnamed tributary to the South Anna River.

See **Attachment 2** for a facility schematic/diagram.

TABLE 1
OUTFALL DESCRIPTION

Number	Discharge Sources	Treatment	Design Flow	Latitude / Longitude
001	Domestic Wastewater	See Section 10	0.040 MGD	37° 58′ 14″ / 77° 54′ 59″
See **Attachment 3** for the Pendleton topographic map.				

11. Sludge Treatment and Disposal Methods:

Sludge is held in an aerobic sludge holding tank/digestor and pumped by a licensed septic hauler as warranted. Sludge is hauled to the Little Falls Run WWTF (VA0076392) for further treatment and disposal.

12. Discharges and Monitoring Stations within Waterbody VAN-F03R:

TABLE 2
DISCHARGES AND MONITORING STATIONS LOCATED WITHIN VAN-F03R

Permit Number	Facility Name	Type	Receiving Stream
VAR051528	Dominion Pallet Incorporated	Stormwater Industrial General Permit	Cub Creek
8-SAR052.03	DEQ Monitoring Station – Route 601		South Anna River

13. Material Storage:

TABLE 3
MATERIAL STORAGE

Materials Description	Volume Stored	Spill/Stormwater Prevention Measures
Diesel Fuel	Above ground fuel tank for emergency generator	Not Applicable
Soda Ash	Two (2) 50 lb. bags	Under roof

14. Site Inspection:

DEQ-NRO Compliance and Permitting Staff conducted a site visit on 4 February 2014 (see **Attachment 4**).

Several issues were found and discussed during the site visit. The extraordinary discharge that occurred during this visit is not indicative of normal operations; result of human error. Maintenance personnel inadvertently produced a discharge of the treatment plant prior to the SBR decant completion resulting in the discharge of solids from the facility into the receiving stream. The report requests corrective actions undertaken to correct deficiencies noted during the inspection.

15. Receiving Stream Water Quality and Water Quality Standards:

a. Ambient Water Quality Data

This facility discharges into an unnamed tributary to the South Anna River that has not been monitored or assessed. There is no downstream DEQ water quality monitoring stations located within an appropriate distance of the outfall to provide useful water quality information. A downstream water quality summary is not provided.

It is noted that the closest downstream DEQ monitoring station is 8-SAR058.13, located approximately 12.2 miles downstream of Outfall 001. This station is a freshwater probabilistic monitoring station on the South Anna River with a limited number of samples. There is a DEQ ambient trend monitoring station, 8-SAR068.57, located on the South Anna River at the Rt. 605 bridge, approximately 1.6 miles upstream of the confluence with the unnamed tributary (receiving stream). The closest downstream DEQ ambient monitoring station is 8-SAR035.05, located approximately 34 miles downstream of Outfall 001.

b. 303(d) Listed Stream Segments and Total Maximum Daily Loads (TMDLs)

TABLE 4
INFORMATION ON DOWNSTREAM 303(d) IMPAIRMENTS AND TMDLs

Waterbody Name	Impaired Use	Cause	Distance From Outfall	TMDL completed	WLA	Basis for WLA
Impairment Information in the 2012 Integrated Report						
South Anna River	Recreation	*E. coli*	30 miles	Pamunkey River Basin Bacteria 2 August 2006	6.96E+10 cfu/year *E. coli*	126 cfu/100 mL *E. coli* --- 0.040 MGD

This facility discharges to an unnamed tributary to the South Anna River within the Chesapeake Bay watershed. The receiving stream has been identified in the Chesapeake Bay TMDL; approved by the Environmental Protection Agency (EPA) on 29 December 2010. The TMDL addresses dissolved oxygen (DO), chlorophyll a and submerged aquatic vegetation (SAV) impairments in the main stem Chesapeake Bay and its tributaries by establishing nonpoint source load allocations (LAs) and point source wasteload allocations (WLAs) for total nitrogen (TN), total phosphorus (TP) and total suspended solids (TSS) to meet applicable Virginia Water Quality Standards contained in 9VAC25-260-185.

Implementation of the Chesapeake Bay TDML is currently accomplished in accordance with the Commonwealth of Virginia's Phase I Watershed Implementation Plan (WIP); approved by EPA on 29 December 2010. The approved WIP recognizes the *General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Bay Watershed of Virginia* (9VAC25-820 et seq.) as controlling the nutrient allocations for non-significant Chesapeake Bay dischargers. The approved WIP states that for non-significant municipal facilities, nutrient WLAs are to be consistent with Code of Virginia procedures, which set baseline WLAs at 2005 permitted design capacity nutrient load levels. In accordance with the WIP, TN and TP WLAs for non-significant facilities are considered aggregate allocations and will not be included in individual permits. The WIP also considers TSS WLAs for non-significant facilities to be aggregate allocations; however, TSS limits are to be included in individual VPDES permits in conformance with the technology-based requirements found in the Clean Water Act. Furthermore, the WIP recognizes that so long as the aggregated TSS permitted loads for all dischargers is less than the aggregated TSS load in the WIP, the individual permit will be consistent with the TMDL.

40 CFR 122.44(d)(1)(vii)(B) requires permits to be written with effluent limits necessary to meet water quality standards and to be consistent with the assumptions and requirements of applicable WLAs. This facility is classified as a non-significant Chesapeake Bay discharger and has not made application for a new or expanded discharge since 2005. It is therefore covered by rule under the 9VAC25-820 regulation. In accordance with the WIP, TN and TP load limits are not included in this individual permit, but are consistent with the TMDL because the current nutrient loads are in conformance with the facility's 2005 permitted design capacity loads. This individual permit includes TSS limits of 30 mg/L that are in conformance with technology-based requirements and, in turn, are consistent with the Chesapeake Bay TMDL.

In addition, this individual permit contains limits for ammonia, $cBOD_5$ and dissolved oxygen which provide protection of instream DO concentrations of at least 5.0 mg/L. Furthermore, implementation of the full Chesapeake Bay WIP, including GP reductions combined with actions proposed in other source sectors, is expected to adequately address ambient conditions such that the proposed effluent limits found within this individual permit are consistent with the Chesapeake Bay TMDL and will not cause an impairment or observed violation of the standards for DO, chlorophyll a or SAV as required by 9VAC25-260-185.

The full planning statement is found in **Attachment 5.**

c. Receiving Stream Water Quality Criteria

Part IX of 9VAC25-260(360-550) designates classes and special standards applicable to defined Virginia river basins and sections. The receiving stream South Anna River, UT, is located within Section 3 of the York River Basin and classified as Class III water.

At all times, Class III waters must achieve a dissolved oxygen (D.O.) of 4.0 mg/L or greater, a daily average D.O. of 5.0 mg/L or greater, a temperature that does not exceed 32° C and maintain a pH of 6.0 – 9.0 standard units (S.U.).

The Freshwater Water Quality Criteria / Wasteload Allocation Analysis details other water quality criteria applicable to the receiving stream. Some Water Quality Criteria are dependent on the pH, temperature or total hardness values of the receiving stream and/or final effluent. These values were utilized to determine the criterion found in **Attachment 6** for the following pollutants:

1) pH and temperature-Dependent Ammonia Criteria

The fresh water, aquatic life Water Quality Criteria for ammonia is dependent on the instream and/or effluent pH and temperature values. Since the effluent may have an impact on the instream values, effluent pH and temperature values must also be considered when determining the ammonia criteria for the receiving stream. The 90th percentile pH and temperature values are utilized because they best represent the critical conditions of the receiving stream.

The critical 30Q10 flow, utilized to ascertain ammonia criteria, for the immediate receiving stream has been determined to be 0.0 MGD. However, as stated in **Attachment 1**, the receiving stream becomes perennial at a point approximately 0.7 miles downstream of the discharge. Due to this relatively short distance, it was staff's best professional judgement that ambient data for the perennial portion of the receiving stream could be utilized during this analysis; however, there was no data available. Instead, staff employed stream data that has been calculated by watershed to obtain pH, temperature and hardness values. This data is indicative of typical stream conditions that are located within the waterbody VAN-F03R.

Attachment 7 details the derivation of the 90th percentile effluent pH values obtained from the June 2009 to December 2013 Discharge Monitoring Reports which was also employed while establishing the ammonia criterion. Since effluent temperature data was not readily available, a default temperature value of 25° C and an assumed temperature value of 15° C for summer and winter, respectively, were utilized.

2) Hardness-Dependent Metals Criteria

The Water Quality Criteria for some metals are dependent on the receiving stream and/or effluent total hardness values (expressed as mg/L calcium carbonate). A hardness value of 25.6 mg/L $CaCO_3$, as calculated for the waterbody VAN-F03R, was used for the receiving stream. There was no hardness data available for this facility; therefore, staff guidance suggests utilizing a default hardness value of 50 mg/L $CaCO_3$.

The hardness-dependent metals criteria in **Attachment 6** are based on this default value.

3) Bacteria Criteria

The Virginia Water Quality Standards at 9VAC25-260-170.A state that the following criteria shall apply to protect primary recreational uses in surface waters:

E. coli bacteria per 100 mL of water shall not exceed the following:

	Geometric Mean[1]
Freshwater *E. coli* (N/100 mL)	126

[1]For a minimum of four weekly samples taken during any calendar month

d. Receiving Stream Special Standards

The State Water Control Board's Water Quality Standards, River Basin Section Tables (9VAC25-260-360, 370 and 380) designates the river basins, sections, classes and special standards for surface waters of the Commonwealth of Virginia. The receiving stream, South Anna River, UT, is located within Section 3 of the York River Basin. This section has not been designated with a special standard.

e. Threatened or Endangered Species

The Virginia DGIF Fish and Wildlife Information System Database was searched on 23 January 2014 for records to determine if there are threatened or endangered species in the vicinity of the discharge. The following threatened or endangered species were identified within a three (3) mile radius of the discharge: fluted kidneyshell (*Ptychobranchus subtentum*); dwarf Wedgemussel (*Alasmidonta heterodon*); Rafinesque's eastern big-eared bat (*Corynorhinus rafinesquii macrotis*); upland sandpiper (*Bartramia longicauda*); loggerhead shrike (*Lanius ludovicianus*); green floater (*Lasmigona subviridis*); and migrant loggerhead shrike (*Lanius ludovicianus migrans*). The limits proposed in this draft permit are protective of the Virginia Water Quality Standards and protect the threatened and endangered species found near the discharge.

In addition, the Department of Conservation and Recreation was coordinated during this reissuance per the procedures as set forth in the 2007 Memorandum of Understanding (MOU) concerning Threatened and Endangered Species Screening for VPDES Permits. The purpose of this coordination is to obtain input from other agencies during the permitting process to ascertain potential adverse impacts to threatened and endangered species and/or their habitats.

Any comments from these agencies are located in Section 26 of this Fact Sheet.

16. Antidegradation (9VAC25-260-30):

All state surface waters are provided one of three levels of antidegradation protection. For Tier 1 or existing use protection, existing uses of the water body and the water quality to protect these uses must be maintained. Tier 2 water bodies have water quality that is better than the water quality standards. Significant lowering of the water quality of Tier 2 waters is not allowed without an evaluation of the economic and social impacts. Tier 3 water bodies are exceptional waters and are so designated by regulatory amendment. The antidegradation policy prohibits new or expanded discharges into exceptional waters.

The receiving stream has been classified as Tier 2. Even though the immediate receiving stream is intermittent with critical flows of zero, the stream becomes perennial less than 0.7 miles downstream of the discharge and there is no data available indicating that water quality standards are being violated in the perennial portion of the receiving stream. Therefore, staff's best professional judgement is to utilize the available ambient and flow data for this section of the receiving stream to ensure that this discharge does not cause nor contribute to any significant degradation to the existing water quality downstream of this facility. This also reflects the protocol utilized during the modeling of this discharge and previous permit reissuances.

In accordance with current DEQ guidance, no significant lowering of water quality is to occur where permit limits are based on the following:

- The dissolved oxygen in the receiving stream is not lowered more than 0.2 mg/L from the existing levels;
- The pH of the receiving stream is maintained within the range 6.0 – 9.0 S.U.;

- There is compliance with all temperature criteria applicable to the receiving stream;
- No more than 25% of the unused assimilative capacity is allocated for toxic criteria established for the protection of aquatic life; and
- No more than 10% of the unused assimilative capacity is allocated for criteria for the protection of human health.

The antidegradation policy also prohibits the expansion of mixing zones to Tier 2 waters unless the requirements of 9VAC25-260-30.A.2 are met. The draft permit is not proposing an expansion of the existing mixing zone.

17. Effluent Screening, Wasteload Allocation and Effluent Limitation Development:

To determine water quality-based effluent limitations for a discharge, the suitability of data must first be determined. Data is suitable for analysis if one or more representative data points are equal to or above the quantification level ("QL") and the data represent the exact pollutant being evaluated.

Next, the appropriate Water Quality Standards (WQS) are determined for the pollutants in the effluent. Then, the Wasteload Allocations (WLAs) are calculated. In this case the critical 7Q10, 1Q10 and 30Q10 flows for the immediate receiving stream have been determined to be zero and that portion could be comprised entirely of effluent. Therefore, it is staff's best professional judgement that the WLAs will equal the WQS to ensure both the immediate and perennial portions of the receiving stream is protected at all times.

The WLA values are then compared with available effluent data to determine the need for effluent limitations. Effluent limitations are needed if the 97th percentile of the daily effluent concentration values is greater than the acute wasteload allocation or if the 97th percentile of the four-day average effluent concentration values is greater than the chronic wasteload allocation. Effluent limitations are based on the most limiting WLA, the required sampling frequency and statistical characteristics of the effluent data.

a. Effluent Screening

Effluent data obtained from the June 2009 – December 2013 Discharge Monitoring Reports (DMRs) and the permit application has been reviewed and determined to be suitable for evaluation.

Please see **Attachment** 7 for a summary of effluent data.

Since this is a facility treating domestic sewage, a reasonable potential analysis for ammonia is required by staff.

b. Antidegradation Wasteload Allocations (AWLAs)

Since the receiving stream has been determined to be Tier 2 water, staff must also determine antidegradation wasteload allocations (AWLAs). The steady state complete mix equation is used substituting the antidegradation baseline (C_b) for the instream water quality criteria (C_o):

$$AWLA = \frac{C_b(Q_e + Q_s) - (C_s)(Q_s)}{Q_e}$$

Where:
- AWLA = Antidegradation-based wasteload allocation
- C_b = In-stream antidegradation baseline concentration
- Q_e = Design flow
- Q_s = Critical receiving stream flow (1Q10 for acute aquatic life criteria; 7Q10 for chronic aquatic life criteria; 30Q10 for ammonia criteria; harmonic mean for carcinogen-human health criteria; and 30Q5 for non-carcinogen human health criteria)
- C_s = Mean background concentration of parameter in the receiving stream.

Staff derived wasteload allocations where parameters are reasonably expected to be present in an effluent and/or where effluent data indicate the pollutant is present in the discharge above quantifiable levels. With regard to Outfall 001, ammonia as N is expected/likely present since this is a wastewater treatment plant treating domestic sewage.

See **Attachment 8** detailing the mixing analysis results. As discussed previously, staff utilized critical stream flow data found in **Attachment 1** for the perennial portion of the receiving stream to ascertain the mixing allowance for this discharge. Calculated AWLAs for the pollutants noted in Section 17.a. above are presented in **Attachment 6.**

c. Effluent Limitations, Outfall 001 – Toxic Pollutants

9VAC25-31-220.D. requires limits be imposed where a discharge has a reasonable potential to cause or contribute to an instream excursion of water quality criteria. Those parameters with AWLAs that are near effluent concentrations are evaluated for limits.

The VPDES Permit Regulation at 9VAC25-31-230.D. requires that monthly and weekly average limitations be imposed for continuous discharges from POTWs and monthly average and daily maximum limitations be imposed for all other continuous non-POTW discharges.

1) Ammonia as N / TKN

Staff evaluated the ambient and effluent pH and temperature data, the calculated ammonia water criteria and wasteload allocations for this discharge. DEQ guidance suggests using a sole data point of 9.0 mg/L to ensure the evaluation adequately addresses the potential for ammonia to be present in a discharge resulting from the treatment of domestic sewage.

The current ammonia limit of 1.1 mg/L is still protective of aquatic life and shall be carried forward with this reissuance. See **Attachment 9** for the ammonia limit derivations.

2) Total Residual Chlorine (TRC)

Ultraviolet (UV) radiation is utilized for disinfection at this facility; therefore, derivation of chlorine limitations is not warranted since this pollutant is not expected to be present in appreciable amounts.

3) Metals/Organics

It is staff's best professional judgement that given the wastewater sources; limitations are not warranted at this time.

d. Effluent Limitations and Monitoring, Outfall 001 – Conventional and Non-Conventional Pollutants

No changes to dissolved oxygen (D.O.), carbonaceous-biochemical oxygen demand-5 day ($cBOD_5$), total suspended solids (TSS), ammonia and pH limitations are proposed.

Dissolved oxygen, seasonal $cBOD_5$ and ammonia (in lieu of TKN) limitations are based on the stream modeling conducted in March 1999 (**Attachment 10**) and are set to ensure that the receiving stream D.O. does not decrease more than 0.2 mg/L to meet the requirements of the antidegradation policy.

pH limitations are set at the water quality criteria.

E. coli limitations are in accordance with the Water Quality Standards 9VAC25-260-170.

e. Effluent Limitations and Monitoring Summary

The effluent limitations are presented in Section 19. Limits were established for carbonaceous-biochemical oxygen demand-5 day ($cBOD_5$), total suspended solids (TSS), ammonia as N, pH, dissolved oxygen (D.O.) and *E. coli.*

The limit for total suspended solids is based on Federal Effluent Standards for Secondary Treatment.

The mass loading (kg/d) for monthly and weekly averages were calculated by multiplying the concentration values (mg/L), with the flow values (in MGD) and then a conversion factor of 3.785.

Sample Type and Frequency are in accordance with the recommendations in the VPDES Permit Manual.

The VPDES Permit Regulation at 9VAC25-31-30 and 40 CFR Part 133 require that the facility achieve at least 85% removal for cBOD and TSS (or 65% for equivalent to secondary). This permit required influent BOD and TSS monitoring during the last permit term and results demonstrated that 85% removal is being attained at this facility; therefore, influent monitoring for BOD and TSS will cease with this reissuance.

18. Antibacksliding:

All limits in this permit are at least as stringent as those previously established. Backsliding does not apply to this reissuance.

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19. Effluent Limitations/Monitoring Requirements:

Design flow is 0.040 MGD.
Effective Dates: During the period beginning with the permit's effective date and lasting until the expiration date.

PARAMETER	BASIS FOR LIMITS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
		Monthly Average	Weekly Average	Minimum	Maximum	Frequency	Sample Type
Flow (MGD)	NA	NL	NA	NA	NL	1/D	Estimate
pH	3	NA	NA	6.0 S.U.	9.0 S.U.	1/D	Grab
$cBOD_5$ (November – April)	3,4	23 mg/L 3.5 kg/day	34 mg/L 5.1 kg/day	NA	NA	1/M	Grab
$cBOD_5$ (May – October)	3,4	7.5 mg/L 1.1 kg/day	11 mg/L 1.7 kg/day	NA	NA	1/M	Grab
Total Suspended Solids (TSS) *	1,2	30 mg/L 4.5 kg/day	45 mg/L 6.8 kg/day	NA	NA	1/M	Grab
Dissolved Oxygen (DO)	3,4	NA	NA	6.5 mg/L	NA	1/D	Grab
Ammonia, as N	2,3	1.1 mg/L	1.1 mg/L	NA	NA	1/M	Grab
E. coli (Geometric Mean) **	3,5	126 n/100mL	NA	NA	NA	1/W	Grab

The basis for the limitations codes are:

1. Federal Effluent Requirements
2. Best Professional Judgement
3. Water Quality Standards
4. Stream Model – **Attachment 10**
5. Pamunkey River Basin Bacteria TMDL

MGD = Million gallons per day.
NA = Not applicable.
NL = No limit; monitor and report.
S.U. = Standard units.

1/D = Once every day.
1/W = Once every week.
1/M = Once every month.

Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.
Grab = An individual sample collected over a period of time not to exceed 15 minutes.

* At least 85% removal shall be attained for this effluent.
Results shall be expressed as two (2) significant figures.

**Samples shall be collected between 10:00 a.m. and 4:00 p.m.

20. Other Permit Requirements:

Part I.B. of the permit contains quantification levels and compliance reporting instructions.

9VAC25-31-190.L.4.c. requires an arithmetic mean for measurement averaging and 9VAC25-31-220.D requires limits be imposed where a discharge has a reasonable potential to cause or contribute to an instream excursion of water quality criteria. Specific analytical methodologies for toxics are listed within this permit section as well as quantification levels (QLs) necessary to demonstrate compliance with applicable permit limitations or for use in future evaluations to determine if the pollutant has reasonable potential to cause or contribute to a violation. Required averaging methodologies are also specified.

21. Other Special Conditions:

a. 95% Capacity Reopener. The VPDES Permit Regulation at 9VAC25-31-200.B.4 requires all POTWs and PVOTWs develop and submit a plan of action to DEQ when the monthly average influent flow to their sewage treatment plant reaches 95% or more of the design capacity authorized in the permit for each month of any three consecutive month period. This facility is a PVOTW.

b. Indirect Dischargers. Required by VPDES Permit Regulation, 9VAC25-31-200.B.1 and B.2 for POTWs and PVOTWs that receive waste from someone other than the owner of the treatment works.

c. O&M Manual Requirement. Required by Code of Virginia §62.1-44.19; Sewage Collection and Treatment Regulations, 9VAC25-790; VPDES Permit Regulation, 9VAC25-31-190.E. The permittee shall maintain a current Operations and Maintenance (O&M) Manual. The permittee shall operate the treatment works in accordance with the O&M Manual and shall make the O&M Manual available to Department personnel for review upon request. Any changes in the practices and procedures followed by the permittee shall be documented in the O&M Manual within 90 days of the effective date of the changes. Non-compliance with the O&M Manual shall be deemed a violation of the permit.

d. CTC, CTO Requirement. The Code of Virginia § 62.1-44.19; Sewage Collection and Treatment Regulations, 9VAC25-790 requires that all treatment works treating wastewater obtain a Certificate to Construct prior to commencing construction and to obtain a Certificate to Operate prior to commencing operation of the treatment works.

e. Licensed Operator Requirement. The Code of Virginia at §54.1-2300 et seq., the VPDES Permit Regulation at 9VAC25-31-200.C. and by the Board for Waterworks and Wastewater Works Operators and Onsite Sewage System Professionals Regulations (18VAC160-20-10 et seq.) requires licensure of operators. This facility requires a Class III operator.

f. Reliability Class. The Sewage Collection and Treatment Regulations at 9VAC25-790 require sewage treatment works to achieve a certain level of reliability in order to protect water quality and public health consequences in the event of component or system failure. Reliability means a measure of the ability of the treatment works to perform its designated function without failure or interruption of service. This facility is required to meet reliability Class II.

g. Sludge Reopener. The VPDES Permit Regulation at 9VAC25-31-220.C. requires all permits issued to treatment works treating domestic sewage (including sludge-only facilities) include a reopener clause allowing incorporation of any applicable standard for sewage sludge use or disposal promulgated under Section 405(d) of the CWA.

h. Sludge Use and Disposal. The VPDES Permit Regulation at 9VAC25-31-100.P.; 220.B.2, and 420 through 720, and 40 CFR Part 503 require all treatment works treating domestic sewage to submit information on their sludge use and disposal practices and to meet specified standards for sludge use and disposal. The facility includes a treatment works treating domestic sewage.

i. TMDL Reopener. Section 303(d) of the Clean Water Act requires that Total Maximum Daily Loads (TMDLs) be developed for streams listed as impaired. This special condition is to allow the permit to be reopened if necessary to bring it into compliance with any applicable TMDL approved for the receiving stream. The reopener recognizes that, according to Section 402(o)(1) of the Clean Water Act, limits and/or conditions may be either more or less stringent than those contained in this permit. Specifically, they can be relaxed if they are the result of a TMDL, basin plan or other wasteload allocation prepared under section 303 of the Act.

22. Permit Section Part II.

Part II of the permit contains standard conditions that appear in all VPDES Permits. In general, these standard conditions address the responsibilities of the permittee, reporting requirements, testing procedures and records retention.

23. Changes to the Permit from the Previously Issued Permit:

a. Special Conditions:

No changes to the Special Conditions occurred during this reissuance.

b. Monitoring and Effluent Limitations:

Influent monitoring for total suspended solids and biochemical oxygen demand 5-day has been removed with this reissuance. This annual requirement was completed during the last permit term and demonstrates that the facility is achieving at least 85% removal rate as per Federal Effluent Guidelines.

24. Variances/Alternate Limits or Conditions:

Not Applicable.

25. Public Notice Information:

First Public Notice Date: 13 March 2014 Second Public Notice Date: 20 March 2014

Public Notice Information is required by 9VAC25-31-280.B. All pertinent information is on file and may be inspected and copied by contacting the: DEQ Northern Regional Office; 13901 Crown Court, Woodbridge, VA 22193; Telephone No. 703-583-3873; Douglas.Frasier@deq.virginia.gov. See **Attachment 11** for a copy of the public notice document.

Persons may comment in writing or by email to the DEQ on the proposed permit action, and may request a public hearing, during the comment period. Comments shall include the name, address, and telephone number of the writer and of all persons represented by the commenter/requester, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. The DEQ may decide to hold a public hearing, including another comment period, if public response is significant and there are substantial, disputed issues relevant to the permit. Requests for public hearings shall state 1) the reason why a hearing is requested; 2) a brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requester, including how and to what extent such interest would be directly and adversely affected by the permit; and 3) specific references, where possible, to terms and conditions of the permit with suggested revisions. Following the comment period, the Board will make a determination regarding the proposed permit action. This determination will become effective, unless the DEQ grants a public hearing. Due notice of any public hearing will be given. The public may request an electronic copy of the draft permit and fact sheet or review the draft permit and application at the DEQ Northern Regional Office by appointment.

26. Additional Comments:

Previous Board Action(s):	Not applicable; however, the observed discharge noted during the site visit on 4 February 2014 by DEQ staff may illicit Board action.
Staff Comments:	No comments noted.
State/Federal Agency Comments:	Department of Conservation and Recreation had no comment regarding this facility.
Public Comment:	No comments were received during the public comment period.
Owner Comment:	No comments received.

Fact Sheet Attachments

Table of Contents

Six-0-Five Mobile Home Park STP
VA0090140
2014 Reissuance

ATTACHMENT 1

Flow Frequency Determination

RECEIVING WATERS INFORMATION

Receiving Stream: South Anna River, U.T.

Flow: At the discharge point, the receiving stream is intermittent with critical flows of zero. The stream becomes perennial at a point approximately 0.7 miles downstream of the discharge. **At the point at which the stream becomes perennial, the flows are as follows:**

1Q10:	0.003 MGD
7Q10:	0.003 MGD
30Q5:	0.014 MGD
High Flow 1Q10:	0.043 MGD
High Flow 7Q10:	0.054 MGD
Harmonic Mean:	0.061 MGD

The high flow months are November through April.

Source: DEQ Analysis (October 20, 1998)

Temperature, hardness, and pH:
The discharge is to an intermittent stream with critical flows of zero, therefore temperature, hardness, and pH characteristics are not applicable for modeling that portion. For the first 0.7 mile segment, the stream is modeled using the assumed effluent characteristics for both receiving stream and effluent.

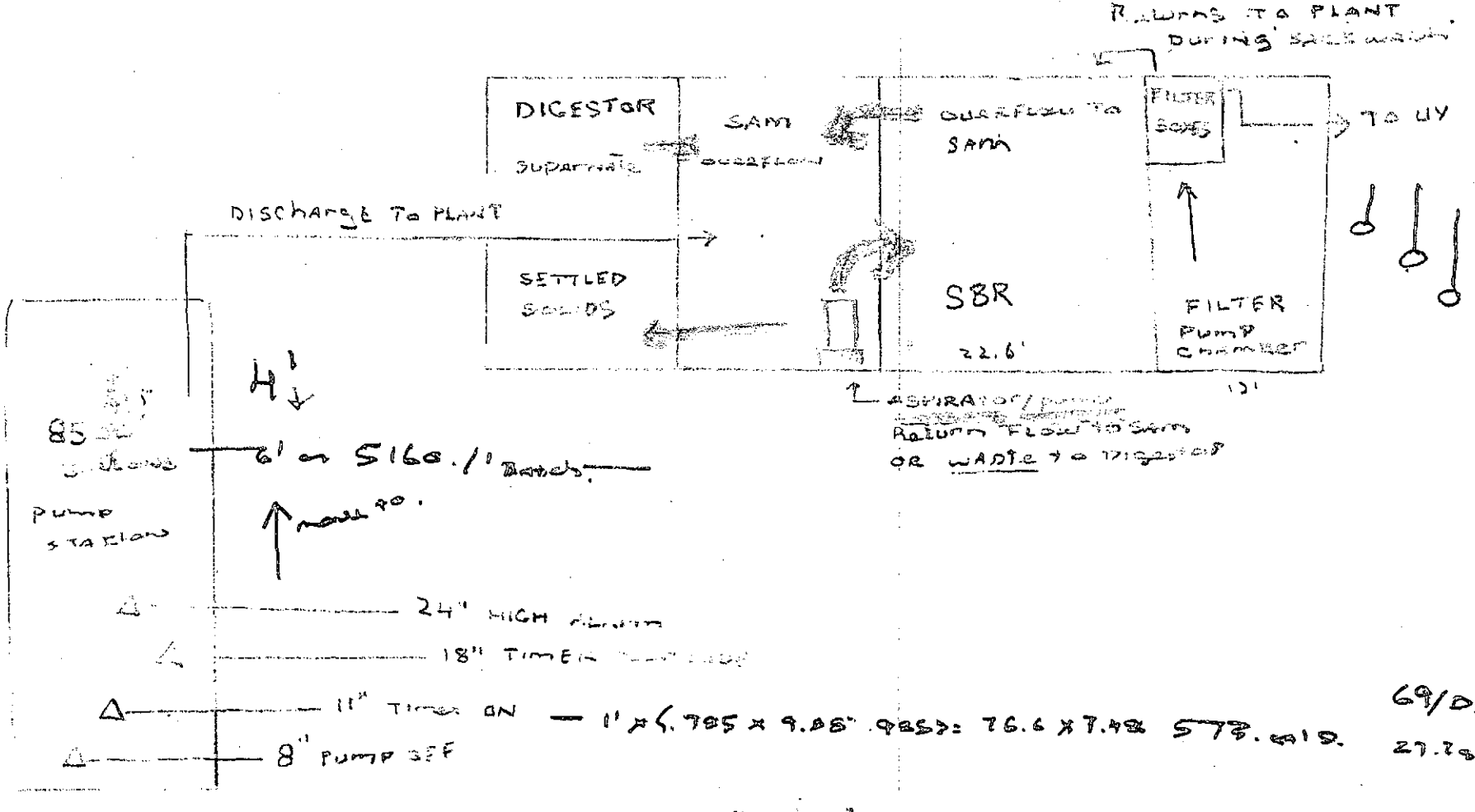
For the antidegradation review, the characteristics of the perennial portion of the receiving stream are as follows:

pH :	Annual 90% = 7.4 Annual 10% = 6.0 (Source: STORET data station 8-SAR068.57)
Temperature:	25 °C 15 °C (Source: Best Professional Judgement due to lack of adequate site-specific data.)
Hardness:	27 mg/l (Source: STORET data station 8-SAR068.57)

Toxics Data:
The receiving stream is intermittent, therefore all toxic pollutant concentrations for this point are assumed to be zero. There are no data available at the perennial point so all toxic pollutant concentrations for this point are assumed to be zero, also.

ATTACHMENT 2

Facility Schematic/Diagram



11' × 6.785 × 9.85' .985 = 76.6 × 7.48 573. gal.

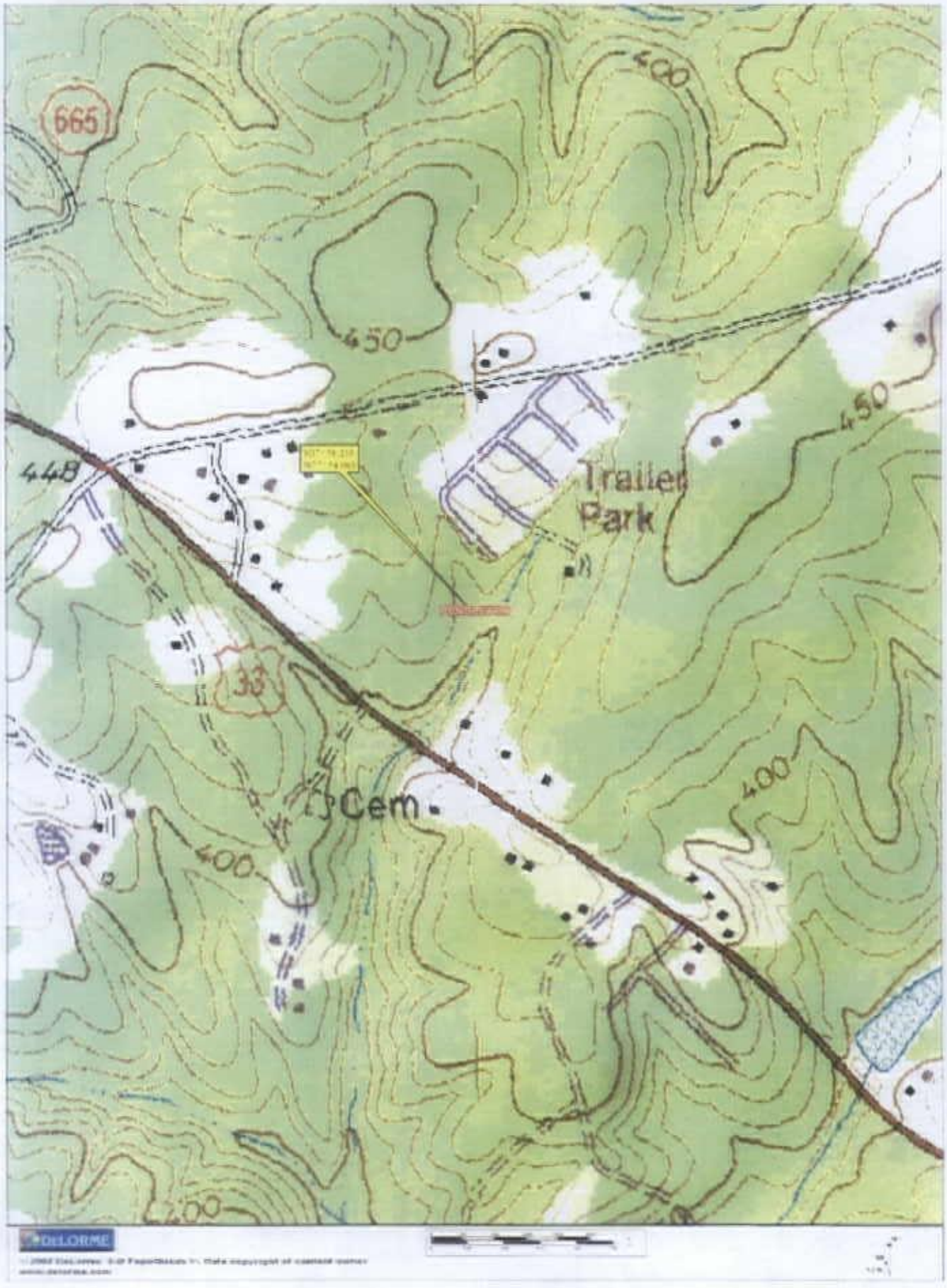
69/0.

27.7 gpm.

27.7 gpm. Avg.

ATTACHMENT 3

Topographic Map


665
400
450
448
450
Trailer
Park
33
Cem
400
400
400

ATTACHMENT 4

Site Inspection Report

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
NORTHERN REGIONAL OFFICE
13901 Crown Court, Woodbridge, Virginia 22193
(703) 583-3800 Fax (703) 583-3821
www.deq.virginia.gov

Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

Thomas Faha
Regional Director

March 3, 2014

Mr. James Benson
SMG. LLC
PO Box 70367
Richmond, VA 23255-0367

Re: **Six-O-Five Sewage Treatment Plant, Permit VA0090140**

Dear Mr. Benson:

Attached is a copy of the Compliance Inspection Report generated from the Site Inspections conducted at the Six-O-Five Sewage Treatment Plant (STP) on February 4, 2014. This letter is not intended as a case decision under the Virginia Administrative Process Act, Va. Code § 2.2-4000 et seq. (APA).

A written response concerning the items listed in the Request for Corrective Actions is due to this office by April 3, 2014. Included in this response should be a plan of action and timetable for resolving these compliance issues, if they have not already been addressed. Your response may be sent either via the US postal Service or electronically, we recommend sending it as an Acrobat PDF or in a Word-compatible, write-protected format. Additional inspections may be conducted to confirm the facility is in compliance with permit requirements.

If you have any questions or comments concerning this report, please feel free to contact me at the Northern Regional Office at (703) 583-3909 or by e-mail at Rebecca.Johnson@deq.virginia.gov .

Sincerely,

Rebecca J. Johnson

Rebecca Johnson
Environmental Specialist II

cc: Permits / DMR File; Compliance Manager; Compliance Auditor; Compliance Inspector
Mike Cook - TetraOps

Virginia Department of Environmental Quality

COMPLIANCE INSPECTION REPORT

FACILITY NAME: Six-O-Five STP			**INSPECTION DATE:**	February 4, 2014
			INSPECTOR	Rebecca Johnson
PERMIT No.: VA0090140			**REPORT DATE:**	March 3, 2014
TYPE OF FACILITY:	☑ Municipa	☐ Major	**TIME OF INSPECTION:**	Arrival 0945 / Departure 1100
	☐ Industrial	☐ Minor		
	☐ Federal	☑ Small Minor	**TOTAL TIME SPENT (including prep & travel)**	16 hours
	☐ HP ☐ LP			
PHOTOGRAPHS:	☑ Yes	☐ No	**UNANNOUNCED INSPECTION?**	☐ Yes ☑ No
REVIEWED BY / Date:	Edward L. Hurt 2/28/14			
PRESENT DURING INSPECTION:	Doug Frasier - DEQ Mike Cook, TetraOps - Operator			

Paraphrase Noncompliance Issues	Reported Cause of Noncompliance:	Corrective Action Taken:
WL #2014-02-N-1011: 1. Permit Application due November 24, 2013.	1. Mr. Cook forgot to submit the permit application on time.	1. Mr. Cook submitted the permit application on January 21, 2014.
WL #2014-01-N-1004: 2. Permit Application due November 24, 2013 and not received until January 21, 2014	2. Mr. Cook forgot to submit the permit application on time.	2. Mr. Cook submitted the permit application on January 21, 2014.

INSPECTION OVERVIEW AND CONDITION OF TREATMENT UNITS

Ms. Rebecca Johnson and Mr. Doug Frasier arrived onsite at 945 and met with Mr. Michael Cook, TetraOps, Contract Operator. The weather was cold, cloudy and in the mid 30's. The facility's permit will expire on May 24, 2014 and Mr. Frasier, Water Permit Writer, wanted to check on the operations of the facility prior to re-issuance of the VPDES permit.

Approximately fifteen minutes into the inspection DEQ staff observed the facility was discharging solids. Mr. Cook said one of the operators/electricians accidently forced a discharge from the SBR when turning on the switch to see if the UV unit was operational. Mr. Cook gave Ms. Johnson and Mr. Frasier a tour of the facility and the following observations were made:

Sequencing Batch Reactor (SBR) – The mixed liquors had an earthy aroma and chocolate brown appearance indicating a healthy biomass population. Rust observed on the grates on top of the SBR. **See Request for Corrective Actions. Photo 1**

Sand Filter – Since the facility had just been discharging partially treated wastewater, the sand filters were clogged with solids. **Photos 2 & 3**

UV – The unit was not online while the mixed liquors were flowing through and out into the final effluent.

Post Aeration – Solids were observed in this unit.

Final Effluent Outfall 001 – Solids were observed downstream of the outfall. Mr. Frasier walked down approximately 10 yards and observed the solids in the stream. The solids aroma was strong at the outfall pipe. Mr. Cook collected a sample from the outfall. **See Request for Corrective Actions. Photos 6 – 10**

Ms. Johnson advised Mr. Cook to call in this incident to DEQ-NRO Pollution Response Program (PReP).

Review of Laboratory Records

There was no logbook onsite. Mr. Cook keeps his records on loose leaf papers. Ms. Johnson explained the importance of keeping a logbook with operators signing in and out, conducting process control tests, final effluent analysis and sampling, etc.

The YSI 550A D.O. meter was last certified against an NIST thermometer in April 2013. The Oakton pH Testr 3+ had not been NIST certified. **See Request for Corrective Actions.**

DEQ staff departed at 1100.

Photo Log:

Photos from the inspection can be viewed on the U drive @:
U:\PHOTOS\WATER FACILITIES\Six-O-Five Village MHP STP\2-4-14

Permit #	VA0090140

EFFLUENT FIELD DATA: Mr. Cook collected a final effluent sample while DEQ was onsite.

Flow	MGD	**Dissolved Oxygen**	mg/L	**TRC (Contact Tank)**	mg/L
pH	S.U.	**Temperature**	°C	**TRC (Final Effluent)**	mg/L
Was a Sampling Inspection conducted?	☐ Yes (see Sampling Inspection Report) ☑ No				

CONDITION OF OUTFALL AND EFFLUENT CHARACTERISTICS:

1. Type of outfall: ☑ Shore based ☐ Submerge Diffuser? ☐ Yes ☑ No
2. Are the outfall and supporting structures in good condition? ☑ Yes ☐ No
3. Final Effluent (evidence of following problems): ☑ Sludge bar ☐ Grease
   ☑ Turbid effluent ☑ Visible foam ☑ Unusual ☐ Oil sheen
4. Is there a visible effluent plume in the receiving stream? ☑ Yes ☐ No
5. Receiving stream: ☐ No observed ☑ Indication of problems (explain below)

Comments: **Solids were observed in the receiving stream and the effluent was turbid.**

REQUEST for CORRECTIVE ACTION:

1. As stated in Permit VA0090140, Part II, Section F; "**Unauthorized Discharges.** Except in compliance with this permit, or another permit issued by the Board, it shall be unlawful for any person to: 1. Discharge into state waters sewage, industrial wastes, other wastes, or any noxious or deleterious substances; or 2. Otherwise alter the physical, chemical or biological properties of such state waters and make them detrimental to the public health, or to animal or aquatic life, or to the use of such waters for domestic or industrial consumption, or for recreation, or for other uses." As stated in Permit VA0090140, Part II, Section Q; "**Proper Operation and Maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes effective plant performance, adequate funding, adequate staffing, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by the permittee only when the operation is necessary to achieve compliance with the conditions of this permit." As stated in Permit VA0090140, Part II, Section R; **Disposal of solids or sludges.** Solids, sludges or

other pollutants removed in the course of treatment or management of pollutants shall be disposed of in a manner so as to prevent any pollutant from such materials from entering state waters." Solids were observed discharging into the receiving stream from the final effluent outfall. **Provide an explanation as to how the facility plans to address this issue by April 3, 2014.**

2. The grates on top of the SBR were rusting and Ms. Johnson recommended replacing the grates for the safety of the operations staff. **Provide an explanation as to how the facility plans to address this issue by April 3, 2014.**

3. Annual certification of the pH probe thermister against an NIST thermometer shall be documented and provided upon DEQ request. This documentation was not available to DEQ upon request. **Provide documentation of the NIST certification of the pH probe thermister by April 3, 2014.**

4. The operational logbook shall be kept onsite and maintained daily, to include; arrival and departure time and date of operations staff, operator's signature, process control testing performed onsite, final effluent analysis and final effluent sample collections. **Provide an explanation as to how the facility plans to address this issue by April 3 2014.**

NOTES and COMMENTS:

- The convention for identifying laboratory methods used for compliance purposes, has changed under the 40 CFR Part 136 Method Rules Update published in May 2012. Analytical methods in Standard Methods must now be identified by the method's approved date, rather than by an edition number.

  Example: Rather than referencing pH as SM 18th edition, 4500-H+ B, the proper reference for the current approved method is SM 4500 - H^+B-2000. Please note that pH methods published in Standard Methods earlier than 2000 (SM 21st edition) will no longer be acceptable for compliance purposes.

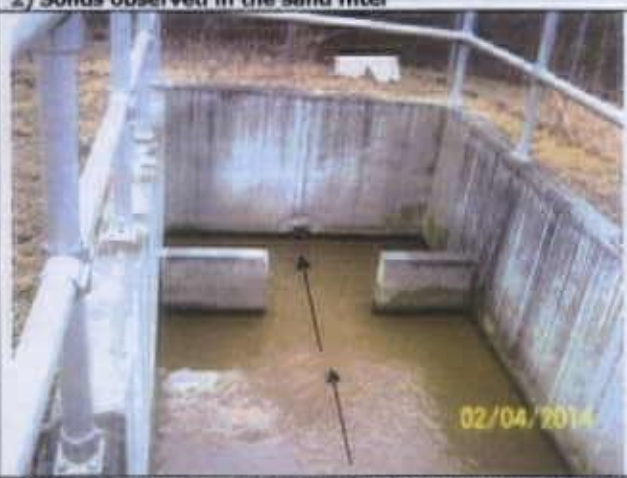
  The Virginia Division of Consolidated Laboratory Services Environmental Laboratory Certification Program Technical Assistance Document published April 2013 states "All laboratory documentation and reported data must be Methods Update Rule (MUR)-compliance by February 1, 2014". This requirement is being applied to field analyses as well as to laboratory analyses.

  * The pdf that can be found on the DCLS website of the FAQ for the DCLS MUR-Compliance April 23, 2013.

1) Rusting grates on top of the Sequencing Batch Reactor

2) Solids observed in the sand filter

3) Solids observed in the sand filter



4) Mixed liquors in the tank prior to the post aeration tank (Black arrows indicate direction of flow)

5) Mixed liquor in the tank after UV disinfection (Black arrows indicate direction of flow)

6) Cloudy effluent from Outfall 001 final effluent discharge pipe.

7) Solids in the receiving stream

8) Foam and scum downstream of the final effluent outfall.

9) Solids downstream of the final effluent outfall.

10) Solids downstream of the final effluent outfall.
(Black arrows indicate direction of flow)

Six-O-Five STP
Photos Taken and Layout By: Rebecca Johnson

VA0090140
February 4, 2014
Page 2 of 2

ATTACHMENT 5

Planning Statement

To:	Jennifer Carlson
From:	Douglas Frasier
Date:	4 February 2014
Subject:	Planning Statement for Six-0-Five Mobile Home Park
Permit Number:	VA0090140

Information for Outfall 001:

Discharge Type:	minor, municipal
Discharge Flow:	0.04 MGD
Receiving Stream:	South Anna River, UT
Latitude / Longitude:	37° 58' 14" / 77° 54' 59"
Rivermile:	3.6
Streamcode:	8-XDR
Waterbody:	VAN-F03R
Water Quality Standards:	Class III, Section 3
Drainage Area:	<1 square mile

1. Please provide water quality monitoring information for the receiving stream segment. If there is not monitoring information for the receiving stream segment, please provide information on the nearest downstream monitoring station, including how far downstream the monitoring station is from the outfall.

   This facility discharges into an unnamed tributary to the South Anna River that has not been monitored or assessed. There are not any downstream DEQ water quality monitoring stations located within an appropriate distance of the outfall to provide useful water quality information. A downstream water quality summary is not provided.

   It is noted that the closest downstream DEQ monitoring station is 8-SAR058.13, located approximately 12.2 miles downstream of Outfall 001. This station is a freshwater probabilistic monitoring station on the South Anna River with a limited number of samples. There is a DEQ ambient trend monitoring station, 8-SAR068.57, located on the South Anna River at the Rt. 605 bridge, approximately 1.6 miles upstream of the confluence with the unnamed tributary (receiving stream). The closest downstream DEQ ambient monitoring station is 8-SAR035.05, located approximately 34 miles downstream of Outfall 001.

2. Does this facility discharge to a stream segment on the 303(d) list? If yes, please fill out Table A.

   No.

3. Are there any downstream 303(d) listed impairments that are relevant to this discharge? If yes, please fill out Table B.

   Yes.

Table B. Information on Downstream 303(d) Impairments and TMDLs

Waterbody Name	Impaired Use	Cause	Distance From Outfall	TMDL completed	WLA	Basis for WLA	TMDL Schedule
Impairment Information in the 2012 Integrated Report							
South Anna River	Recreation	*E. coli*	30 miles	Pamunkey River Basin Bacteria 8/2/2006	6.96E+10 cfu/year *E. coli*	126 cfu/100 ml *E. coli* --- 0.040 MGD	---

4. Is there monitoring or other conditions that Planning/Assessment needs in the permit?

   There is a completed downstream TMDL for the aquatic life use impairment for the Chesapeake Bay. However, the Bay TMDL and the WLAs contained within the TMDL are not addressed in this planning statement.

5. Fact Sheet Requirements -- Please provide information regarding any drinking water intakes located within a 5 mile radius of the discharge point.

   There are no public water supply intakes located within 5 miles of this discharge.

ATTACHMENT 6

Water Quality Criteria / Wasteload Allocation Analysis

FRESHWATER
WATER QUALITY CRITERIA / WASTELOAD ALLOCATION ANALYSIS

Facility Name: Six-0-Five Village MHP Permit No.: VA0090140

Receiving Stream: South Anna River, UT Version: OWP Guidance Memo 00-2011 (8/24/00)

Stream Information		Stream Flows		Mixing Information		Effluent Information	
Mean Hardness (as CaCO3) =	25.6 mg/L	1Q10 (Annual) =	0.003 MGD	Annual - 1Q10 Mix =	100 %	Mean Hardness (as CaCO3) =	50 mg/L
90% Temperature (Annual) =	23.5 deg C	7Q10 (Annual) =	0.003 MGD	- 7Q10 Mix =	100 %	90% Temp (Annual) =	25 deg C
90% Temperature (Wet season) =	13.7 deg C	30Q10 (Annual) =	0.003 MGD	- 30Q10 Mix =	100 %	90% Temp (Wet season) =	15 deg C
90% Maximum pH =	7.4 SU	1Q10 (Wet season) =	0.043 MGD	Wet Season - 1Q10 Mix =	100 %	90% Maximum pH =	7.6 SU
10% Maximum pH =	6.5 SU	30Q10 (Wet season)	0.043 MGD	- 30Q10 Mix =	100 %	10% Maximum pH =	6.6 SU
Tier Designation (1 or 2) =	2	30Q5 =	0.014 MGD			Discharge Flow =	0.04 MGD
Public Water Supply (PWS) Y/N? =	n	Harmonic Mean =	0.061 MGD				
Trout Present Y/N? =	n						
Early Life Stages Present Y/N? =	y						

Parameter	Background	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
(ug/l unless noted)	Conc.	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Acenapthene	0	--	--	na	9.9E+02	--	--	na	1.3E+03	--	--	na	9.9E+01	--	--	na	1.3E+02	--	--	na	**1.3E+02**
Acrolein	0	--	--	na	9.3E+00	--	--	na	1.3E+01	--	--	na	9.3E-01	--	--	na	1.3E+00	--	--	na	**1.3E+00**
Acrylonitrile [C]	0	--	--	na	2.5E+00	--	--	na	6.3E+00	--	--	na	2.5E-01	--	--	na	6.3E-01	--	--	na	**6.3E-01**
Aldrin [C]	0	3.0E+00	--	na	5.0E-04	3.2E+00	--	na	1.3E-03	7.5E-01	--	na	5.0E-05	8.1E-01	--	na	1.3E-04	**8.1E-01**	--	na	**1.3E-04**
Ammonia-N (high) (Yearly)	0	1.75E+01	2.07E+00	na	--	1.88E+01	2.23E+00	na	--	4.38E+00	5.18E-01	na	--	4.71E+00	5.57E-01	na	--	**4.71E+00**	**5.57E-01**	na	--
Ammonia-N (high) (High Flow)	0	2.03E+01	4.42E+00	na	--	4.22E+01	9.17E+00	na	--	5.08E+00	1.11E+00	na	--	1.06E+01	2.29E+00	na	--	**1.06E+01**	**2.29E+00**	na	--
Anthracene	0	--	--	na	4.0E+04	--	--	na	5.4E+04	--	--	na	4.0E+03	--	--	na	5.4E+03	--	--	na	**5.4E+03**
Antimony	0	--	--	na	6.4E+02	--	--	na	8.6E+02	--	--	na	6.4E+01	--	--	na	8.6E+01	--	--	na	**8.6E+01**
Arsenic	0	3.4E+02	1.5E+02	na	--	3.7E+02	1.6E+02	na	--	8.5E+01	3.8E+01	na	--	9.1E+01	4.0E+01	na	--	**9.1E+01**	**4.0E+01**	na	--
Barium	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--
Benzene [C]	0	--	--	na	5.1E+02	--	--	na	1.3E+03	--	--	na	5.1E+01	--	--	na	1.3E+02	--	--	na	**1.3E+02**
Benzidine [C]	0	--	--	na	2.0E-03	--	--	na	5.1E-03	--	--	na	2.0E-04	--	--	na	5.1E-04	--	--	na	**5.1E-04**
Benzo (a) anthracene [C]	0	--	--	na	1.8E-01	--	--	na	4.5E-01	--	--	na	1.8E-02	--	--	na	4.5E-02	--	--	na	**4.5E-02**
Benzo (b) fluoranthene [C]	0	--	--	na	1.8E-01	--	--	na	4.5E-01	--	--	na	1.8E-02	--	--	na	4.5E-02	--	--	na	**4.5E-02**
Benzo (k) fluoranthene [C]	0	--	--	na	1.8E-01	--	--	na	4.5E-01	--	--	na	1.8E-02	--	--	na	4.5E-02	--	--	na	**4.5E-02**
Benzo (a) pyrene [C]	0	--	--	na	1.8E-01	--	--	na	4.5E-01	--	--	na	1.8E-02	--	--	na	4.5E-02	--	--	na	**4.5E-02**
Bis2-Chloroethyl Ether [C]	0	--	--	na	5.3E+00	--	--	na	1.3E+01	--	--	na	5.3E-01	--	--	na	1.3E+00	--	--	na	**1.3E+00**
Bis2-Chloroisopropyl Ether	0	--	--	na	6.5E+04	--	--	na	8.8E+04	--	--	na	6.5E+03	--	--	na	8.8E+03	--	--	na	**8.8E+03**
Bis 2-Ethylhexyl Phthalate [C]	0	--	--	na	2.2E+01	--	--	na	5.6E+01	--	--	na	2.2E+00	--	--	na	5.6E+00	--	--	na	**5.6E+00**
Bromoform [C]	0	--	--	na	1.4E+03	--	--	na	3.5E+03	--	--	na	1.4E+02	--	--	na	3.5E+02	--	--	na	**3.6E+02**
Butylbenzylphthalate	0	--	--	na	1.9E+03	--	--	na	2.6E+03	--	--	na	1.9E+02	--	--	na	2.6E+02	--	--	na	**2.6E+02**
Cadmium	0	1.7E+00	6.4E-01	na	--	1.9E+00	6.9E-01	na	--	4.3E-01	1.6E-01	na	--	4.6E-01	1.7E-01	na	--	**4.6E-01**	**1.7E-01**	na	--
Carbon Tetrachloride [C]	0	--	--	na	1.6E+01	--	--	na	4.0E+01	--	--	na	1.6E+00	--	--	na	4.0E+00	--	--	na	**4.0E+00**
Chlordane [C]	0	2.4E+00	4.3E-03	na	8.1E-03	2.6E+00	4.6E-03	na	2.0E-02	6.0E-01	1.1E-03	na	8.1E-04	6.5E-01	1.2E-03	na	2.0E-03	**6.5E-01**	**1.2E-03**	na	**2.0E-03**
Chloride	0	8.6E+05	2.3E+05	na	--	9.2E+05	2.5E+05	na	--	2.2E+05	5.8E+04	na	--	2.3E+05	6.2E+04	na	--	**2.3E+05**	**6.2E+04**	na	--
TRC	0	1.9E+01	1.1E+01	na	--	2.0E+01	1.2E+01	na	--	4.8E+00	2.8E+00	na	--	5.1E+00	3.0E+00	na	--	**5.1E+00**	**3.0E+00**	na	--
Chlorobenzene	0	--	--	na	1.6E+03	--	--	na	2.2E+03	--	--	na	1.6E+02	--	--	na	2.2E+02	--	--	na	**2.2E+02**

Parameter	Background	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
(ug/l unless noted)	Conc.	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Chlorodibromomethane[C]	0	--	--	na	1.3E+02	--	--	na	3.3E+02	--	--	na	1.3E+01	--	--	na	3.3E+01	--	--	na	**3.3E+01**
Chloroform	0	--	--	na	1.1E+04	--	--	na	1.5E+04	--	--	na	1.1E+03	--	--	na	1.5E+03	--	--	na	**1.5E+03**
2-Chloronaphthalene	0	--	--	na	1.6E+03	--	--	na	2.2E+03	--	--	na	1.6E+02	--	--	na	2.2E+02	--	--	na	**2.2E+02**
2-Chlorophenol	0	--	--	na	1.5E+02	--	--	na	2.0E+02	--	--	na	1.5E+01	--	--	na	2.0E+01	--	--	na	**2.0E+01**
Chlorpyrifos	0	8.3E-02	4.1E-02	na	--	8.9E-02	4.4E-02	na	--	2.1E-02	1.0E-02	na	--	2.2E-02	1.1E-02	na	--	**2.2E-02**	**1.1E-02**	na	--
Chromium III	0	3.1E+02	4.1E+01	na	--	3.4E+02	4.4E+01	na	--	7.8E+01	1.0E+01	na	--	8.4E+01	1.1E+01	na	--	**8.4E+01**	**1.1E+01**	na	--
Chromium VI	0	1.6E+01	1.1E+01	na	--	1.7E+01	1.2E+01	na	--	4.0E+00	2.8E+00	na	--	4.3E+00	3.0E+00	na	--	**4.3E+00**	**3.0E+00**	na	--
Chromium, Total	0	--	--	1.0E+02	--	--	--	na	--	--	--	1.0E+01	--	--	--	1.4E+01	--	--	--	na	--
Chrysene[C]	0	--	--	na	1.8E-02	--	--	na	4.5E-02	--	--	na	1.8E-03	--	--	na	4.5E-03	--	--	na	**4.5E-03**
Copper	0	6.8E+00	4.6E+00	na	--	7.3E+00	5.2E+00	na	--	1.7E+00	1.2E+00	na	--	1.8E+00	1.3E+00	na	--	**1.8E+00**	**1.3E+00**	na	--
Cyanide, Free	0	2.2E+01	5.2E+00	na	1.6E+04	2.4E+01	5.6E+00	na	2.2E+04	5.5E+00	1.3E+00	na	1.6E+03	5.9E+00	1.4E+00	na	2.2E+03	**5.9E+00**	**1.4E+00**	na	**2.2E+03**
DDD[C]	0	--	--	na	3.1E-03	--	--	na	7.8E-03	--	--	na	3.1E-04	--	--	na	7.8E-04	--	--	na	**7.8E-04**
DDE[C]	0	--	--	na	2.2E-03	--	--	na	5.6E-03	--	--	na	2.2E-04	--	--	na	5.6E-04	--	--	na	**5.6E-04**
DDT[C]	0	1.1E+00	1.0E-03	na	2.2E-03	1.2E+00	1.1E-03	na	5.6E-03	2.8E-01	2.5E-04	na	2.2E-04	3.0E-01	2.7E-04	na	5.6E-04	**3.0E-01**	**2.7E-04**	na	**5.6E-04**
Demeton	0	--	1.0E-01	na	--	--	1.1E-01	na	--	--	2.5E-02	na	--	--	2.7E-02	na	--	--	**2.7E-02**	na	--
Diazinon	0	1.7E-01	1.7E-01	na	--	1.8E-01	1.8E-01	na	--	4.3E-02	4.3E-02	na	--	4.6E-02	4.6E-02	na	--	**4.6E-02**	**4.6E-02**	na	--
Dibenz(a,h)anthracene[C]	0	--	--	na	1.8E-01	--	--	na	4.5E-01	--	--	na	1.8E-02	--	--	na	4.5E-02	--	--	na	**4.5E-02**
1,2-Dichlorobenzene	0	--	--	na	1.3E+03	--	--	na	1.8E+03	--	--	na	1.3E+02	--	--	na	1.8E+02	--	--	na	**1.8E+02**
1,3-Dichlorobenzene	0	--	--	na	9.6E+02	--	--	na	1.3E+03	--	--	na	9.6E+01	--	--	na	1.3E+02	--	--	na	**1.3E+02**
1,4-Dichlorobenzene	0	--	--	na	1.9E+02	--	--	na	2.6E+02	--	--	na	1.9E+01	--	--	na	2.6E+01	--	--	na	**2.6E+01**
3,3-Dichlorobenzidine[C]	0	--	--	na	2.8E-01	--	--	na	7.1E-01	--	--	na	2.8E-02	--	--	na	7.1E-02	--	--	na	**7.1E-02**
Dichlorobromomethane[C]	0	--	--	na	1.7E+02	--	--	na	4.3E+02	--	--	na	1.7E+01	--	--	na	4.3E+01	--	--	na	**4.3E+01**
1,2-Dichloroethane[C]	0	--	--	na	3.7E+02	--	--	na	9.3E+02	--	--	na	3.7E+01	--	--	na	9.3E+01	--	--	na	**9.3E+01**
1,1-Dichloroethylene	0	--	--	na	7.1E+03	--	--	na	9.6E+03	--	--	na	7.1E+02	--	--	na	9.6E+02	--	--	na	**9.6E+02**
1,2-trans-dichloroethylene	0	--	--	na	1.0E+04	--	--	na	1.4E+04	--	--	na	1.0E+03	--	--	na	1.4E+03	--	--	na	**1.4E+03**
2,4-Dichlorophenol	0	--	--	na	2.9E+02	--	--	na	3.9E+02	--	--	na	2.9E+01	--	--	na	3.9E+01	--	--	na	**3.9E+01**
2,4-Dichlorophenoxy acetic acid (2,4-D)	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--
1,2-Dichloropropane[C]	0	--	--	na	1.5E+02	--	--	na	3.8E+02	--	--	na	1.5E+01	--	--	na	3.8E+01	--	--	na	**3.8E+01**
1,3-Dichloropropene[C]	0	--	--	na	2.1E+02	--	--	na	5.3E+02	--	--	na	2.1E+01	--	--	na	5.3E+01	--	--	na	**5.3E+01**
Dieldrin[C]	0	2.4E-01	5.6E-02	na	5.4E-04	2.6E-01	6.0E-02	na	1.4E-03	6.0E-02	1.4E-02	na	5.4E-05	6.5E-02	1.5E-02	na	1.4E-04	**6.5E-02**	**1.5E-02**	na	**1.4E-04**
Diethyl Phthalate	0	--	--	na	4.4E+04	--	--	na	5.9E+04	--	--	na	4.4E+03	--	--	na	5.9E+03	--	--	na	**5.9E+03**
2,4-Dimethylphenol	0	--	--	na	8.5E+02	--	--	na	1.1E+03	--	--	na	8.5E+01	--	--	na	1.1E+02	--	--	na	**1.1E+02**
Dimethyl Phthalate	0	--	--	na	1.1E+06	--	--	na	1.5E+06	--	--	na	1.1E+05	--	--	na	1.5E+05	--	--	na	**1.5E+05**
Di-n-Butyl Phthalate	0	--	--	na	4.5E+03	--	--	na	6.1E+03	--	--	na	4.5E+02	--	--	na	6.1E+02	--	--	na	**6.1E+02**
2,4 Dinitrophenol	0	--	--	na	5.3E+03	--	--	na	7.2E+03	--	--	na	5.3E+02	--	--	na	7.2E+02	--	--	na	**7.2E+02**
2-Methyl-4,6-Dinitrophenol	0	--	--	na	2.8E+02	--	--	na	3.8E+02	--	--	na	2.8E+01	--	--	na	3.8E+01	--	--	na	**3.8E+01**
2,4-Dinitrotoluene[C]	0	--	--	na	3.4E+01	--	--	na	8.6E+01	--	--	na	3.4E+00	--	--	na	8.6E+00	--	--	na	**8.6E+00**
Dioxin 2,3,7,8-tetrachlorodibenzo-p-dioxin	0	--	--	na	5.1E-08	--	--	na	6.9E-08	--	--	na	5.1E-09	--	--	na	6.9E-09	--	--	na	**6.9E-09**
1,2-Diphenylhydrazine[C]	0	--	--	na	2.0E+00	--	--	na	5.1E+00	--	--	na	2.0E-01	--	--	na	5.1E-01	--	--	na	**5.1E-01**
Alpha-Endosulfan	0	2.2E-01	5.6E-02	na	8.9E+01	2.4E-01	6.0E-02	na	1.2E+02	5.5E-02	1.4E-02	na	8.9E+00	5.9E-02	1.5E-02	na	1.2E+01	**5.9E-02**	**1.5E-02**	na	**1.2E+01**
Beta-Endosulfan	0	2.2E-01	5.6E-02	na	8.9E+01	2.4E-01	6.0E-02	na	1.2E+02	5.5E-02	1.4E-02	na	8.9E+00	5.9E-02	1.5E-02	na	1.2E+01	**5.9E-02**	**1.5E-02**	na	**1.2E+01**
Alpha + Beta Endosulfan	0	2.2E-01	5.6E-02	--	--	2.4E-01	6.0E-02	--	--	5.5E-02	1.4E-02	--	--	5.9E-02	1.5E-02	--	--	**5.9E-02**	**1.5E-02**	--	--
Endosulfan Sulfate	0	--	--	na	8.9E+01	--	--	na	1.2E+02	--	--	na	8.9E+00	--	--	na	1.2E+01	--	--	na	**1.2E+01**
Endrin	0	8.6E-02	3.6E-02	na	6.0E-02	9.2E-02	3.9E-02	na	8.1E-02	2.2E-02	9.0E-03	na	6.0E-03	2.3E-02	9.7E-03	na	8.1E-03	**2.3E-02**	**9.7E-03**	na	**8.1E-03**
Endrin Aldehyde	0	--	--	na	3.0E-01	--	--	na	4.1E-01	--	--	na	3.0E-02	--	--	na	4.1E-02	--	--	na	**4.1E-02**

Parameter	Background	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
(ug/l unless noted)	Conc.	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute *	Chronic	HH (PWS)	HH
Ethylbenzene	0	--	--	na	2.1E+03	--	--	na	2.8E+03	--	--	na	2.1E+02	--	--	na	2.8E+02	--	--	na	**2.8E+02**
Fluoranthene	0	--	--	na	1.4E+02	--	--	na	1.9E+02	--	--	na	1.4E+01	--	--	na	1.9E+01	--	--	na	**1.9E+01**
Fluorene	0	--	--	na	5.3E+03	--	--	na	7.2E+03	--	--	na	5.3E+02	--	--	na	7.2E+02	--	--	na	**7.2E+02**
Foaming Agents	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--
Guthion	0	--	1.0E-02	na	--	--	1.1E-02	na	--	--	2.5E-03	na	--	--	2.7E-03	na	--	--	**2.7E-03**	na	--
Heptachlor [C]	0	5.2E-01	3.8E-03	na	7.9E-04	5.6E-01	4.1E-03	na	2.0E-03	1.3E-01	9.5E-04	na	7.9E-05	1.4E-01	1.0E-03	na	2.0E-04	**1.4E-01**	**1.0E-03**	na	**2.0E-04**
Heptachlor Epoxide[C]	0	5.2E-01	3.8E-03	na	3.9E-04	5.6E-01	4.1E-03	na	9.8E-04	1.3E-01	9.5E-04	na	3.9E-05	1.4E-01	1.0E-03	na	9.8E-05	**1.4E-01**	**1.0E-03**	na	**9.8E-05**
Hexachlorobenzene[C]	0	--	--	na	2.9E-03	--	--	na	7.3E-03	--	--	na	2.9E-04	--	--	na	7.3E-04	--	--	na	**7.3E-04**
Hexachlorobutadiene[C]	0	--	--	na	1.8E+02	--	--	na	4.5E+02	--	--	na	1.8E+01	--	--	na	4.5E+01	--	--	na	**4.5E+01**
Hexachlorocyclohexane Alpha-BHC[C]	0	--	--	na	4.9E-02	--	--	na	1.2E-01	--	--	na	4.9E-03	--	--	na	1.2E-02	--	--	na	**1.2E-02**
Hexachlorocyclohexane Beta-BHC[C]	0	--	--	na	1.7E-01	--	--	na	4.3E-01	--	--	na	1.7E-02	--	--	na	4.3E-02	--	--	na	**4.3E-02**
Hexachlorocyclohexane Gamma-BHC[C] (Lindane)	0	9.5E-01	na	na	1.8E+00	1.0E+00	--	na	4.5E+00	2.4E-01	--	na	1.8E-01	2.6E-01	--	na	4.5E-01	**2.6E-01**	--	na	**4.5E-01**
Hexachlorocyclopentadiene	0	--	--	na	1.1E+03	--	--	na	1.5E+03	--	--	na	1.1E+02	--	--	na	1.5E+02	--	--	na	**1.5E+02**
Hexachloroethane[C]	0	--	--	na	3.3E+01	--	--	na	8.3E+01	--	--	na	3.3E+00	--	--	na	8.3E+00	--	--	na	**8.3E+00**
Hydrogen Sulfide	0	--	2.0E+00	na	--	--	2.2E+00	na	--	--	5.0E-01	na	--	--	5.4E-01	na	--	--	**5.4E-01**	na	--
Indeno (1,2,3-cd) pyrene [C]	0	--	--	na	1.8E-01	--	--	na	4.5E-01	--	--	na	1.8E-02	--	--	na	4.5E-02	--	--	na	**4.5E-02**
Iron	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--
Isophorone[C]	0	--	--	na	9.6E+03	--	--	na	2.4E+04	--	--	na	9.6E+02	--	--	na	2.4E+03	--	--	na	**2.4E+03**
Kepone	0	--	0.0E+00	na	--	--	0.0E+00	na	--	--	0.0E+00	na	--	--	0.0E+00	na	--	--	**0.0E+00**	na	--
Lead	0	4.7E+01	5.3E+00	na	--	5.1E+01	5.8E+00	na	--	1.2E+01	1.3E+00	na	--	1.3E+01	1.4E+00	na	--	**1.3E+01**	**1.4E+00**	na	--
Malathion	0	--	1.0E-01	na	--	--	1.1E-01	na	--	--	2.5E-02	na	--	--	2.7E-02	na	--	--	**2.7E-02**	na	--
Manganese	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--
Mercury	0	1.4E+00	7.7E-01	--	--	1.5E+00	8.3E-01	--	--	3.5E-01	1.9E-01	--	--	3.8E-01	2.1E-01	--	--	**3.8E-01**	**2.1E-01**	--	--
Methyl Bromide	0	--	--	na	1.5E+03	--	--	na	2.0E+03	--	--	na	1.5E+02	--	--	na	2.0E+02	--	--	na	**2.0E+02**
Methylene Chloride [C]	0	--	--	na	5.9E+03	--	--	na	1.5E+04	--	--	na	5.9E+02	--	--	na	1.5E+03	--	--	na	**1.5E+03**
Methoxychlor	0	--	3.0E-02	na	--	--	3.2E-02	na	--	--	7.5E-03	na	--	--	8.1E-03	na	--	--	**8.1E-03**	na	--
Mirex	0	--	0.0E+00	na	--	--	0.0E+00	na	--	--	0.0E+00	na	--	--	0.0E+00	na	--	--	**0.0E+00**	na	--
Nickel	0	9.9E+01	1.1E+01	na	4.6E+03	1.1E+02	1.2E+01	na	6.2E+03	2.5E+01	2.7E+00	na	4.6E+02	2.6E+01	2.9E+00	na	6.2E+02	**2.6E+01**	**2.9E+00**	na	**6.2E+02**
Nitrate (as N)	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--
Nitrobenzene	0	--	--	na	6.9E+02	--	--	na	9.3E+02	--	--	na	6.9E+01	--	--	na	9.3E+01	--	--	na	**9.3E+01**
N-Nitrosodimethylamine[C]	0	--	--	na	3.0E+01	--	--	na	7.6E+01	--	--	na	3.0E+00	--	--	na	7.6E+00	--	--	na	**7.6E+00**
N-Nitrosodiphenylamine[C]	0	--	--	na	6.0E+01	--	--	na	1.5E+02	--	--	na	6.0E+00	--	--	na	1.5E+01	--	--	na	**1.5E+01**
N-Nitrosodi-n-propylamine[C]	0	--	--	na	5.1E+00	--	--	na	1.3E+01	--	--	na	5.1E-01	--	--	na	1.3E+00	--	--	na	**1.3E+00**
Nonylphenol	0	2.8E+01	6.6E+00	--	--	3.0E+01	7.1E+00	na	--	7.0E+00	1.7E+00	--	--	7.5E+00	1.8E+00	--	--	**7.5E+00**	**1.8E+00**	na	--
Parathion	0	6.5E-02	1.3E-02	na	--	7.0E-02	1.4E-02	na	--	1.6E-02	3.3E-03	na	--	1.7E-02	3.5E-03	na	--	**1.7E-02**	**3.5E-03**	na	--
PCB Total[C]	0	--	1.4E-02	na	6.4E-04	--	1.5E-02	na	1.6E-03	--	3.5E-03	na	6.4E-05	--	3.8E-03	na	1.6E-04	--	**3.8E-03**	na	**1.6E-04**
Pentachlorophenol [C]	0	5.8E+00	4.4E+00	na	3.0E+01	6.2E+00	4.8E+00	na	7.6E+01	1.4E+00	1.1E+00	na	3.0E+00	1.6E+00	1.2E+00	na	7.6E+00	**1.6E+00**	**1.2E+00**	na	**7.6E+00**
Phenol	0	--	--	na	8.6E+05	--	--	na	1.2E+06	--	--	na	8.6E+04	--	--	na	1.2E+05	--	--	na	**1.2E+05**
Pyrene	0	--	--	na	4.0E+03	--	--	na	5.4E+03	--	--	na	4.0E+02	--	--	na	5.4E+02	--	--	na	**5.4E+02**
Radionuclides	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--
(pCi/L)	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--
Beta and Photon Activity (mrem/yr)	0	--	--	na	4.0E+00	--	--	na	5.4E+00	--	--	na	4.0E-01	--	--	na	5.4E-01	--	--	na	**5.4E-01**
Radium 226 + 228 (pCi/L)	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--
Uranium (ug/l)	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--

Parameter	Background	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
(ug/l unless noted)	Conc.	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Selenium, Total Recoverable	0	2.0E+01	5.0E+00	na	4.2E+03	2.2E+01	5.4E+00	na	5.7E+03	5.0E+00	1.3E+00	na	4.2E+02	5.4E+00	1.3E+00	na	5.7E+02	**5.4E+00**	**1.3E+00**	**na**	**5.7E+02**
Silver	0	9.9E-01	--	na	--	1.1E+00	--	na	--	2.5E-01	--	na	--	2.7E-01	--	na	--	**2.7E-01**	**--**	**na**	**--**
Sulfate	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--	**--**	**--**	**na**	**--**
1,1,2,2-Tetrachloroethane[C]	0	--	--	na	4.0E+01	--	--	na	1.0E+02	--	--	na	4.0E+00	--	--	na	1.0E+01	**--**	**--**	**na**	**1.0E+01**
Tetrachloroethylene[C]	0	--	--	na	3.3E+01	--	--	na	8.3E+01	--	--	na	3.3E+00	--	--	na	8.3E+00	**--**	**--**	**na**	**8.3E+00**
Thallium	0	--	--	na	4.7E-01	--	--	na	6.3E-01	--	--	na	4.7E-02	--	--	na	6.3E-02	**--**	**--**	**na**	**6.3E-02**
Toluene	0	--	--	na	6.0E+03	--	--	na	8.1E+03	--	--	na	6.0E+02	--	--	na	8.1E+02	**--**	**--**	**na**	**8.1E+02**
Total dissolved solids	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--	**--**	**--**	**na**	**--**
Toxaphene [C]	0	7.3E-01	2.0E-04	na	2.8E-03	7.8E-01	2.2E-04	na	7.1E-03	1.8E-01	5.0E-05	na	2.8E-04	2.0E-01	5.4E-05	na	7.1E-04	**2.0E-01**	**5.4E-05**	**na**	**7.1E-04**
Tributyltin	0	4.6E-01	7.2E-02	na	--	4.9E-01	7.7E-02	na	--	1.2E-01	1.8E-02	na	--	1.2E-01	1.9E-02	na	--	**1.2E-01**	**1.9E-02**	**na**	**--**
1,2,4-Trichlorobenzene	0	--	--	na	7.0E+01	--	--	na	9.5E+01	--	--	na	7.0E+00	--	--	na	9.5E+00	**--**	**--**	**na**	**9.5E+00**
1,1,2-Trichloroethane[C]	0	--	--	na	1.6E+02	--	--	na	4.0E+02	--	--	na	1.6E+01	--	--	na	4.0E+01	**--**	**--**	**na**	**4.0E+01**
Trichloroethylene [C]	0	--	--	na	3.0E+02	--	--	na	7.6E+02	--	--	na	3.0E+01	--	--	na	7.6E+01	**--**	**--**	**na**	**7.6E+01**
2,4,6-Trichlorophenol [C]	0	--	--	na	2.4E+01	--	--	na	6.1E+01	--	--	na	2.4E+00	--	--	na	6.1E+00	**--**	**--**	**na**	**6.1E+00**
2-(2,4,5-Trichlorophenoxy) [illegible]	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--	**--**	**--**	**na**	**--**
Vinyl Chloride[C]	0	--	--	na	2.4E+01	--	--	na	6.1E+01	--	--	na	2.4E+00	--	--	na	6.1E+00	**--**	**--**	**na**	**6.1E+00**
Zinc	0	6.3E+01	6.4E+01	na	2.6E+04	6.8E+01	6.9E+01	na	3.5E+04	1.6E+01	1.6E+01	na	2.6E+03	1.7E+01	1.7E+01	na	3.5E+03	**1.7E+01**	**1.7E+01**	**na**	**3.5E+03**

Notes:

1. All concentrations expressed as micrograms/liter (ug/l), unless noted otherwise
2. Discharge flow is highest monthly average or Form 2C maximum for Industries and design flow for Municipals
3. Metals measured as Dissolved, unless specified otherwise
4. "C" indicates a carcinogenic parameter
5. Regular WLAs are mass balances (minus background concentration) using the % of stream flow entered above under Mixing Information.
   Antidegradation WLAs are based upon a complete mix.
6. Antideg. Baseline = (0.25(WQC - background conc.) + background conc.) for acute and chronic
   = (0.1(WQC - background conc.) + background conc.) for human health
7. WLAs established at the following stream flows: 1Q10 for Acute, 30Q10 for Chronic Ammonia, 7Q10 for Other Chronic, 30Q5 for Non-carcinogens and Harmonic Mean for Carcinogens. To apply mixing ratios from a model set the stream flow equal to (mixing ratio - 1), effluent flow equal to 1 and 100% mix.

Metal	Target Value (SSTV)
Antimony	8.6E+01
Arsenic	2.4E+01
Barium	na
Cadmium	1.0E-01
Chromium III	6.6E+00
Chromium VI	1.7E+00
Copper	7.3E-01
Iron	na
Lead	8.6E-01
Manganese	na
Mercury	1.2E-01
Nickel	1.8E+00
Selenium	8.1E-01
Silver	1.1E-01
Zinc	6.8E+00

Note: do not use QL's lower than the minimum QL's provided in agency guidance

ATTACHMENT 7

June 2009 – December 2013 Effluent Data
for
Outfall 001

DMR QA/QC

Permit #:VA0090140	Facility:Six O Five Village M H P STP

Rec'd	Parameter Description	QTY AVG	Lim Avg	QTY MAX	Lim Max	CONC MIN	Lim Min	CONC AVG	Lim Avg	CONC MAX	Lim Max
13-Jul-2009	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	0.1	1.1	0.1	1.1
11-Aug-2009	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	0.7	1.1	0.7	1.1
11-Sep-2009	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	<QL	1.1	<QL	1.1
15-Oct-2009	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	0.1	1.1	0.1	1.1
12-Nov-2009	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	<QL	1.1	<QL	1.1
11-Dec-2009	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	0.2	1.1	0.2	1.1
12-Jan-2010	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	<QL	1.1	<QL	1.1
12-Feb-2010	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	<QL	1.1	<QL	1.1
11-Mar-2010	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	0.8	1.1	0.8	1.1
13-Apr-2010	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	0.2	1.1	0.2	1.1
11-May-2010	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	<QL	1.1	<QL	1.1
11-Jun-2010	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	0.2	1.1	0.2	1.1
14-Jul-2010	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	0.2	1.1	0.2	1.1
11-Aug-2010	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	<QL	1.1	<QL	1.1
13-Sep-2010	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	<QL	1.1	<QL	1.1
13-Oct-2010	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	<QL	1.1	<QL	1.1
12-Nov-2010	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	<QL	1.1	<QL	1.1
13-Dec-2010	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	1.3	1.1	1.3	1.1
11-Jan-2011	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	<QL	1.1	<QL	1.1
11-Feb-2011	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	0.1	1.1	0.1	1.1
11-Mar-2011	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	0.1	1.1	0.1	1.1
12-Apr-2011	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	<QL	1.1	<QL	1.1
11-May-2011	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	<QL	1.1	<QL	1.1
13-Jun-2011	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	<QL	1.1	<QL	1.1
12-Jul-2011	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	<QL	1.1	<QL	1.1
11-Aug-2011	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	<QL	1.1	<QL	1.1
15-Sep-2011	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	<QL	1.1	<QL	1.1
11-Oct-2011	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	<QL	1.1	<QL	1.1
14-Nov-2011	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	0.2	1.1	0.2	1.1
13-Dec-2011	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	.2	1.1	.2	1.1
11-Jan-2012	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	<QL	1.1	<QL	1.1
13-Feb-2012	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	<QL	1.1	<QL	1.1
13-Mar-2012	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	<QL	1.1	<QL	1.1
11-Apr-2012	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	0.1	1.1	0.1	1.1
11-May-2012	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	<QL	1.1	<QL	1.1
12-Jun-2012	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	<QL	1.1	<QL	1.1
11-Jul-2012	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	<QL	1.1	<QL	1.1

13-Aug-2012	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	<QL	1.1	<QL	1.1
11-Sep-2012	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	<QL	1.1	<QL	1.1
12-Oct-2012	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	.6	1.1	.6	1.1
15-Nov-2012	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	0.2	1.1	0.2	1.1
12-Dec-2012	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	0.2	1.1	0.2	1.1
14-Jan-2013	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	<QL	1.1	<QL	1.1
13-Feb-2013	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	0.1	1.1	0.1	1.1
14-Mar-2013	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	<QL	1.1	<QL	1.1
12-Apr-2013	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	<QL	1.1	<QL	1.1
13-May-2013	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	<QL	1.1	<QL	1.1
12-Jun-2013	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	<QL	1.1	<QL	1.1
12-Jul-2013	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	<QL	1.1	<QL	1.1
14-Aug-2013	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	0.2	1.1	0.2	1.1
12-Sep-2013	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	0.3	1.1	0.3	1.1
11-Oct-2013	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	0.9	1.1	0.9	1.1
15-Nov-2013	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	0.4	1.1	0.4	1.1
12-Dec-2013	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	0.2	1.1	0.2	1.1
13-Jan-2014	AMMONIA, AS N	NULL	*********	NULL	*********	NULL	*********	0.5	1.1	0.5	1.1
11-Jun-2010	BOD5, INFLUENT	NULL	*********	NULL	*********	NULL	*********	NULL	*********	50	NL
13-Jun-2011	BOD5, INFLUENT	NULL	*********	NULL	*********	NULL	*********	NULL	*********	42.0	NL
12-Jul-2011	BOD5, INFLUENT	NULL	*********	NULL	*********	NULL	*********	NULL	*********	42.0	NL
12-Jul-2013	BOD5, INFLUENT	NULL	*********	NULL	*********	NULL	*********	NULL	*********	<35	NL
13-Jul-2009	CBOD5, MAY-OCT	<QL	1.1	<QL	1.7	NULL	*********	<QL	7.5	<QL	11
11-Aug-2009	CBOD5, MAY-OCT	<QL	1.1	<QL	1.7	NULL	*********	<QL	7.5	<QL	11
11-Sep-2009	CBOD5, MAY-OCT	<QL	1.1	<QL	1.7	NULL	*********	<QL	7.5	<QL	11
15-Oct-2009	CBOD5, MAY-OCT	<QL	1.1	<QL	1.7	NULL	*********	<QL	7.5	<QL	11
12-Nov-2009	CBOD5, MAY-OCT	<QL	1.1	<QL	1.7	NULL	*********	<QL	7.5	<QL	11
11-Jun-2010	CBOD5, MAY-OCT	<QL	1.1	<QL	1.7	NULL	*********	<QL	7.5	<QL	11
14-Jul-2010	CBOD5, MAY-OCT	<QL	1.1	<QL	1.7	NULL	*********	<QL	7.5	<QL	11
11-Aug-2010	CBOD5, MAY-OCT	<QL	1.1	<QL	1.7	NULL	*********	<QL	7.5	<QL	11
13-Sep-2010	CBOD5, MAY-OCT	<QL	1.1	<QL	1.7	NULL	*********	<QL	7.5	<QL	11
13-Oct-2010	CBOD5, MAY-OCT	<QL	1.1	<QL	1.7	NULL	*********	<QL	7.5	<QL	11
12-Nov-2010	CBOD5, MAY-OCT	0.1	1.1	0.1	1.7	NULL	*********	2.0	7.5	2.0	11
13-Jun-2011	CBOD5, MAY-OCT	<QL	1.1	<QL	1.7	NULL	*********	<QL	7.5	<QL	11
12-Jul-2011	CBOD5, MAY-OCT	<QL	1.1	<QL	1.7	NULL	*********	<QL	7.5	<QL	11
11-Aug-2011	CBOD5, MAY-OCT	0.5	1.1	0.5	1.7	NULL	*********	13.0	7.5	13.0	11
15-Sep-2011	CBOD5, MAY-OCT	<QL	1.1	<QL	1.7	NULL	*********	<QL	7.5	<QL	11
11-Oct-2011	CBOD5, MAY-OCT	<QL	1.1	<QL	1.7	NULL	*********	<QL	7.5	<QL	11
14-Nov-2011	CBOD5, MAY-OCT	<QL	1.1	<QL	1.7	NULL	*********	<QL	7.5	<QL	11
12-Jun-2012	CBOD5, MAY-OCT	<QL	1.1	<QL	1.7	NULL	*********	<QL	7.5	<QL	11
11-Jul-2012	CBOD5, MAY-OCT	0.1	1.1	0.1	1.7	NULL	*********	2.0	7.5	2.0	11
13-Aug-2012	CBOD5, MAY-OCT	<QL	1.1	<QL	1.7	NULL	*********	<QL	7.5	<QL	11
11-Sep-2012	CBOD5, MAY-OCT	<QL	1.1	<QL	1.7	NULL	*********	<QL	7.5	<QL	11

12-Oct-2012	CBOD5, MAY-OCT	0.6	1.1	0.6	1.7	NULL	*********	17.0	7.5	17.0	11
15-Nov-2012	CBOD5, MAY-OCT	2.0	1.1	2.0	1.7	NULL	*********	50	7.5	50	11
12-Jun-2013	CBOD5, MAY-OCT	<QL	1.1	<QL	1.7	NULL	*********	<QL	7.5	<QL	11
12-Jul-2013	CBOD5, MAY-OCT	<QL	1.1	<QL	1.7	NULL	*********	<QL	7.5	<QL	11
14-Aug-2013	CBOD5, MAY-OCT	<QL	1.1	<QL	1.7	NULL	*********	<QL	7.5	<QL	11
12-Sep-2013	CBOD5, MAY-OCT	0.8	1.1	0.8	1.7	NULL	*********	2.0	7.5	2.0	11
11-Oct-2013	CBOD5, MAY-OCT	<QL	1.1	<QL	1.7	NULL	*********	<QL	7.5	<QL	11
15-Nov-2013	CBOD5, MAY-OCT	0.5	1.1	0.5	1.7	NULL	*********	10.0	7.5	10.0	11
11-Dec-2009	CBOD5, NOV-APR	<QL	3.5	<QL	5.2	NULL	*********	<QL	23	<QL	34
12-Jan-2010	CBOD5, NOV-APR	<QL	3.5	<QL	5.2	NULL	*********	<QL	23	<QL	34
12-Feb-2010	CBOD5, NOV-APR	0.5	3.5	0.5	5.2	NULL	*********	6.0	23	6.0	34
11-Mar-2010	CBOD5, NOV-APR	0.1	3.5	0.1	5.2	NULL	*********	2.0	23	2.0	34
13-Apr-2010	CBOD5, NOV-APR	<QL	3.5	<QL	5.2	NULL	*********	<QL	23	<QL	34
11-May-2010	CBOD5, NOV-APR	<QL	3.5	<QL	5.2	NULL	*********	<QL	23	<QL	34
13-Dec-2010	CBOD5, NOV-APR	0.5	3.5	0.5	5.2	NULL	*********	5.0	23	5.0	34
11-Jan-2011	CBOD5, NOV-APR	0.2	3.5	0.2	5.2	NULL	*********	3.0	23	3.0	34
11-Feb-2011	CBOD5, NOV-APR	0.3	3.5	0.3	5.2	NULL	*********	8.0	23	8.0	34
11-Mar-2011	CBOD5, NOV-APR	0.2	3.5	0.2	5.2	NULL	*********	4.0	23	4.0	34
12-Apr-2011	CBOD5, NOV-APR	1.0	3.5	1.0	5.2	NULL	*********	20.0	23	20.0	34
11-May-2011	CBOD5, NOV-APR	<QL	3.5	<QL	5.2	NULL	*********	<QL	23	<QL	34
13-Dec-2011	CBOD5, NOV-APR	0.03	3.5	0.03	5.2	NULL	*********	2.0	23	2.0	34
11-Jan-2012	CBOD5, NOV-APR	<QL	3.5	<QL	5.2	NULL	*********	<QL	23	<QL	34
13-Feb-2012	CBOD5, NOV-APR	0.4	3.5	0.4	5.2	NULL	*********	13.0	23	13.0	34
13-Mar-2012	CBOD5, NOV-APR	<QL	3.5	<QL	5.2	NULL	*********	<QL	23	<QL	34
11-Apr-2012	CBOD5, NOV-APR	<QL	3.5	<QL	5.2	NULL	*********	<QL	23	<QL	34
11-May-2012	CBOD5, NOV-APR	<QL	3.5	<QL	5.2	NULL	*********	<QL	23	<QL	34
12-Dec-2012	CBOD5, NOV-APR	<QL	3.5	<QL	5.2	NULL	*********	<QL	23	<QL	34
14-Jan-2013	CBOD5, NOV-APR	<QL	3.5	<QL	5.2	NULL	*********	<QL	23	<QL	34
13-Feb-2013	CBOD5, NOV-APR	0.1	3.5	0.1	5.2	NULL	*********	2.0	23	2.0	34
14-Mar-2013	CBOD5, NOV-APR	<QL	3.5	<QL	5.2	NULL	*********	<QL	23	<QL	34
12-Apr-2013	CBOD5, NOV-APR	<QL	3.5	<QL	5.2	NULL	*********	<QL	23	<QL	34
13-May-2013	CBOD5, NOV-APR	<QL	3.5	<QL	5.2	NULL	*********	<QL	23	<QL	34
12-Dec-2013	CBOD5, NOV-APR	<QL	3.5	<QL	5.2	NULL	*********	<QL	23	<QL	34
13-Jan-2014	CBOD5, NOV-APR	<QL	3.5	<QL	5.2	NULL	*********	<QL	23	<QL	34
13-Jul-2009	PH	NULL	*********	NULL	*********	7.3	6.0	NULL	*********	7.5	9.0
11-Aug-2009	PH	NULL	*********	NULL	*********	7.3	6.0	NULL	*********	7.5	9.0
11-Sep-2009	PH	NULL	*********	NULL	*********	7.2	6.0	NULL	*********	7.6	9.0
15-Oct-2009	PH	NULL	*********	NULL	*********	7.3	6.0	NULL	*********	7.6	9.0
12-Nov-2009	PH	NULL	*********	NULL	*********	7.3	6.0	NULL	*********	7.5	9.0
11-Dec-2009	PH	NULL	*********	NULL	*********	7.3	6.0	NULL	*********	7.5	9.0
12-Jan-2010	PH	NULL	*********	NULL	*********	7.3	6.0	NULL	*********	7.5	9.0
12-Feb-2010	PH	NULL	*********	NULL	*********	7.2	6.0	NULL	*********	7.6	9.0
11-Mar-2010	PH	NULL	*********	NULL	*********	7.2	6.0	NULL	*********	7.5	9.0

13-Apr-2010	PH	NULL	*********	NULL	*********	7.3	6.0	NULL	*********	7.5	9.0
11-May-2010	PH	NULL	*********	NULL	*********	7.3	6.0	NULL	*********	7.4	9.0
11-Jun-2010	PH	NULL	*********	NULL	*********	7.2	6.0	NULL	*********	7.5	9.0
14-Jul-2010	PH	NULL	*********	NULL	*********	7.3	6.0	NULL	*********	7.5	9.0
11-Aug-2010	PH	NULL	*********	NULL	*********	7.3	6.0	NULL	*********	7.5	9.0
13-Sep-2010	PH	NULL	*********	NULL	*********	7.3	6.0	NULL	*********	7.5	9.0
13-Oct-2010	PH	NULL	*********	NULL	*********	7.4	6.0	NULL	*********	7.5	9.0
12-Nov-2010	PH	NULL	*********	NULL	*********	7.3	6.0	NULL	*********	7.6	9.0
13-Dec-2010	PH	NULL	*********	NULL	*********	7.2	6.0	NULL	*********	7.4	9.0
11-Jan-2011	PH	NULL	*********	NULL	*********	7.0	6.0	NULL	*********	7.8	9.0
11-Feb-2011	PH	NULL	*********	NULL	*********	6.8	6.0	NULL	*********	7.6	9.0
11-Mar-2011	PH	NULL	*********	NULL	*********	7.0	6.0	NULL	*********	7.6	9.0
12-Apr-2011	PH	NULL	*********	NULL	*********	7.3	6.0	NULL	*********	7.7	9.0
11-May-2011	PH	NULL	*********	NULL	*********	7.1	6.0	NULL	*********	7.6	9.0
13-Jun-2011	PH	NULL	*********	NULL	*********	7.3	6.0	NULL	*********	7.4	9.0
12-Jul-2011	PH	NULL	*********	NULL	*********	7.2	6.0	NULL	*********	7.6	9.0
11-Aug-2011	PH	NULL	*********	NULL	*********	7.2	6.0	NULL	*********	7.5	9.0
15-Sep-2011	PH	NULL	*********	NULL	*********	7.2	6.0	NULL	*********	7.5	9.0
11-Oct-2011	PH	NULL	*********	NULL	*********	7.2	6.0	NULL	*********	7.5	9.0
14-Nov-2011	PH	NULL	*********	NULL	*********	7.3	6.0	NULL	*********	7.6	9.0
13-Dec-2011	PH	NULL	*********	NULL	*********	7.3	6.0	NULL	*********	7.4	9.0
11-Jan-2012	PH	NULL	*********	NULL	*********	7.1	6.0	NULL	*********	7.6	9.0
13-Feb-2012	PH	NULL	*********	NULL	*********	6.9	6.0	NULL	*********	7.4	9.0
13-Mar-2012	PH	NULL	*********	NULL	*********	6.7	6.0	NULL	*********	7.8	9.0
11-Apr-2012	PH	NULL	*********	NULL	*********	7.0	6.0	NULL	*********	7.6	9.0
11-May-2012	PH	NULL	*********	NULL	*********	7.4	6.0	NULL	*********	7.7	9.0
12-Jun-2012	PH	NULL	*********	NULL	*********	6.6	6.0	NULL	*********	7.7	9.0
11-Jul-2012	PH	NULL	*********	NULL	*********	6.5	6.0	NULL	*********	6.7	9.0
13-Aug-2012	PH	NULL	*********	NULL	*********	6.5	6.0	NULL	*********	6.7	9.0
11-Sep-2012	PH	NULL	*********	NULL	*********	6.5	6.0	NULL	*********	6.9	9.0
12-Oct-2012	PH	NULL	*********	NULL	*********	6.6	6.0	NULL	*********	6.9	9.0
15-Nov-2012	PH	NULL	*********	NULL	*********	6.5	6.0	NULL	*********	6.8	9.0
12-Dec-2012	PH	NULL	*********	NULL	*********	6.6	6.0	NULL	*********	6.8	9.0
14-Jan-2013	PH	NULL	*********	NULL	*********	6.5	6.0	NULL	*********	7.1	9.0
13-Feb-2013	PH	NULL	*********	NULL	*********	6.7	6.0	NULL	*********	7.3	9.0
14-Mar-2013	PH	NULL	*********	NULL	*********	6.6	6.0	NULL	*********	6.8	9.0
12-Apr-2013	PH	NULL	*********	NULL	*********	6.6	6.0	NULL	*********	6.9	9.0
13-May-2013	PH	NULL	*********	NULL	*********	6.5	6.0	NULL	*********	6.8	9.0
12-Jun-2013	PH	NULL	*********	NULL	*********	6.5	6.0	NULL	*********	6.9	9.0
12-Jul-2013	PH	NULL	*********	NULL	*********	6.6	6.0	NULL	*********	7.4	9.0
14-Aug-2013	PH	NULL	*********	NULL	*********	6.8	6.0	NULL	*********	7.3	9.0
12-Sep-2013	PH	NULL	*********	NULL	*********	6.9	6.0	NULL	*********	7.3	9.0
11-Oct-2013	PH	NULL	*********	NULL	*********	6.8	6.0	NULL	*********	7.2	9.0

15-Nov-2013	PH	NULL	*********	NULL	*********	6.8	6.0	NULL	*********	7.1	9.0
12-Dec-2013	PH	NULL	*********	NULL	*********	6.8	6.0	NULL	*********	7.0	9.0
13-Jan-2014	PH	NULL	*********	NULL	*********	6.8	6.0	NULL	*********	7.1	9.0
								90th	7.6	10th	6.6
13-Jul-2009	TSS	0.1	4.5	0.1	6.8	NULL	*********	1.0	30	1.0	45
11-Aug-2009	TSS	0.3	4.5	0.3	6.8	NULL	*********	3.1	30	3.1	45
11-Sep-2009	TSS	0.1	4.5	0.1	6.8	NULL	*********	2.4	30	2.4	45
15-Oct-2009	TSS	0.2	4.5	0.2	6.8	NULL	*********	2.5	30	2.5	45
12-Nov-2009	TSS	0.1	4.5	0.1	6.8	NULL	*********	2.4	30	2.4	45
11-Dec-2009	TSS	0.3	4.5	0.3	6.8	NULL	*********	3.9	30	3.9	45
12-Jan-2010	TSS	0.8	4.5	0.8	6.8	NULL	*********	10.7	30	10.7	45
12-Feb-2010	TSS	0.8	4.5	0.8	6.8	NULL	*********	10.7	30	10.7	45
11-Mar-2010	TSS	0.4	4.5	0.4	6.8	NULL	*********	11.5	30	11.5	45
13-Apr-2010	TSS	0.5	4.5	0.5	6.8	NULL	*********	6.0	30	6.0	45
11-May-2010	TSS	0.2	4.5	0.2	6.8	NULL	*********	4.4	30	4.4	45
11-Jun-2010	TSS	0.22	4.5	0.22	6.8	NULL	*********	3.9	30	3.9	45
14-Jul-2010	TSS	0.1	4.5	0.1	6.8	NULL	*********	1.1	30	1.1	45
11-Aug-2010	TSS	0.2	4.5	0.2	6.8	NULL	*********	3.5	30	3.5	45
13-Sep-2010	TSS	0.5	4.5	0.5	6.8	NULL	*********	6.2	30	6.2	45
13-Oct-2010	TSS	0.2	4.5	0.2	6.8	NULL	*********	3.4	30	3.4	45
12-Nov-2010	TSS	0.2	4.5	0.2	6.8	NULL	*********	3.1	30	3.1	45
13-Dec-2010	TSS	0.2	4.5	0.2	6.8	NULL	*********	4.2	30	4.2	45
11-Jan-2011	TSS	0.3	4.5	0.3	6.8	NULL	*********	6.0	30	6.0	45
11-Feb-2011	TSS	0.2	4.5	0.2	6.8	NULL	*********	3.9	30	3.9	45
11-Mar-2011	TSS	0.1	4.5	0.1	6.8	NULL	*********	2.8	30	2.8	45
12-Apr-2011	TSS	0.2	4.5	0.2	6.8	NULL	*********	4.7	30	4.7	45
11-May-2011	TSS	0.2	4.5	0.2	6.8	NULL	*********	7.0	30	7.0	45
13-Jun-2011	TSS	0.3	4.5	0.3	6.8	NULL	*********	4.7	30	4.7	45
12-Jul-2011	TSS	0.2	4.5	0.2	6.8	NULL	*********	4.2	30	4.2	45
11-Aug-2011	TSS	0.3	4.5	0.3	6.8	NULL	*********	7.6	30	7.6	45
15-Sep-2011	TSS	0.2	4.5	0.2	6.8	NULL	*********	3.2	30	3.2	45
11-Oct-2011	TSS	0.3	4.5	0.3	6.8	NULL	*********	5.2	30	5.2	45
14-Nov-2011	TSS	0.2	4.5	0.2	6.8	NULL	*********	6.0	30	6.0	45
13-Dec-2011	TSS	0.8	4.5	0.8	6.8	NULL	*********	14.0	30	14.0	45
11-Jan-2012	TSS	0.2	4.5	0.2	6.8	NULL	*********	4.8	30	4.8	45
13-Feb-2012	TSS	0.4	4.5	0.4	6.8	NULL	*********	13.0	30	13.0	45
13-Mar-2012	TSS	0.2	4.5	0.2	6.8	NULL	*********	3.7	30	3.7	45
11-Apr-2012	TSS	0.2	4.5	0.2	6.8	NULL	*********	6.0	30	6.0	45
11-May-2012	TSS	0.2	4.5	0.2	6.8	NULL	*********	5.3	30	5.3	45
12-Jun-2012	TSS	0.1	4.5	0.1	6.8	NULL	*********	2.6	30	2.6	45
11-Jul-2012	TSS	0.2	4.5	0.2	6.8	NULL	*********	4.4	30	4.4	45
13-Aug-2012	TSS	<QL	4.5	<QL	6.8	NULL	*********	<QL	30	<QL	45

11-Sep-2012	TSS	0.2	4.5	0.2	6.8	NULL	*********	5.0	30	5.0	45
12-Oct-2012	TSS	0.7	4.5	0.7	6.8	NULL	*********	18.9	30	18.9	45
15-Nov-2012	TSS	0.4	4.5	0.4	6.8	NULL	*********	10.2	30	10.2	45
12-Dec-2012	TSS	0.1	4.5	0.1	6.8	NULL	*********	1.9	30	1.9	45
14-Jan-2013	TSS	0.1	4.5	0.1	6.8	NULL	*********	1.5	30	1.5	45
13-Feb-2013	TSS	0.2	4.5	0.2	6.8	NULL	*********	6.5	30	6.5	45
14-Mar-2013	TSS	0.3	4.5	0.3	6.8	NULL	*********	4.4	30	4.4	45
12-Apr-2013	TSS	0.7	4.5	0.7	6.8	NULL	*********	1.4	30	1.4	45
13-May-2013	TSS	0.2	4.5	0.2	6.8	NULL	*********	3.1	30	3.1	45
12-Jun-2013	TSS	0.3	4.5	0.3	6.8	NULL	*********	4.4	30	4.4	45
12-Jul-2013	TSS	0.1	4.5	0.1	6.8	NULL	*********	2.3	30	2.3	45
14-Aug-2013	TSS	0.2	4.5	0.2	6.8	NULL	*********	3.6	30	3.6	45
12-Sep-2013	TSS	0.1	4.5	0.1	6.8	NULL	*********	2.3	30	2.3	45
11-Oct-2013	TSS	0.1	4.5	0.1	6.8	NULL	*********	3.4	30	3.4	45
15-Nov-2013	TSS	0.2	4.5	0.2	6.8	NULL	*********	3.3	30	3.3	45
12-Dec-2013	TSS	0.2	4.5	0.2	6.8	NULL	*********	3.6	30	3.6	45
13-Jan-2014	TSS	0.6	4.5	0.6	6.8	NULL	*********	1.4	30	1.4	45
11-Jun-2010	TSS, INFLUENT	NULL	*********	NULL	*********	NULL	*********	NULL	*********	139.2	NL
13-Jun-2011	TSS, INFLUENT	NULL	*********	NULL	*********	NULL	*********	NULL	*********	34.4	NL
12-Jul-2011	TSS, INFLUENT	NULL	*********	NULL	*********	NULL	*********	NULL	*********	34.4	NL
12-Jul-2013	TSS, INFLUENT	NULL	*********	NULL	*********	NULL	*********	NULL	*********	4.4	NL

ATTACHMENT 8

Mixing Analysis Results

Mixing Zone Predictions for Six-0-Five Village MHP

Effluent Flow = 0.040 MGD
Stream 7Q10 = 0.003 MGD
Stream 30Q10 = 0.003 MGD
Stream 1Q10 = 0.003 MGD
Stream slope = 0.67 ft/ft
Stream width = 1.0 ft
Bottom scale = 2
Channel scale = 1

Mixing Zone Predictions @ 7Q10

Depth = .0396 ft
Length = 18.42 ft
Velocity = 1.6822 ft/sec
Residence Time = .0001 days

Recommendation:

A complete mix assumption is appropriate for this situation and the entire 7Q10 may be used.

Mixing Zone Predictions @ 30Q10

Depth = .0396 ft
Length = 18.42 ft
Velocity = 1.6822 ft/sec
Residence Time = .0001 days

Recommendation:

A complete mix assumption is appropriate for this situation and the entire 30Q10 may be used.

Mixing Zone Predictions @ 1Q10

Depth = .0396 ft
Length = 18.42 ft
Velocity = 1.6822 ft/sec
Residence Time = .003 hours

Recommendation:

A complete mix assumption is appropriate for this situation and the entire 1Q10 may be used.

ATTACHMENT 9

Ammonia Limitation Derivation

2/18/2014 11:56:07 AM

Facility = Six-0-Five MHP
Chemical = Ammonia
Chronic averaging period = 30
WLAa = 4.71
WLAc = 0.557
Q.L. = 0.2
# samples/mo. = 1
# samples/wk. = 1

Summary of Statistics:

observations = 1
Expected Value = 9
Variance = 29.16
C.V. = 0.6
97th percentile daily values = 21.9007
97th percentile 4 day average = 14.9741
97th percentile 30 day average= 10.8544
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

A limit is needed based on Chronic Toxicity
Maximum Daily Limit = 1.12384224203289
Average Weekly limit = 1.12384224203289
Average Monthly Limit = 1.12384224203289

The data are:

9

ATTACHMENT 10

March 1999 Stream Model

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REGIONAL MODELING SYSTEM VERSION 3.2

DATA FILE SUMMARY

****

THE NAME OF THE DATA FILE IS: NEW605.MOD

THE STREAM NAME IS: South Anna, U.T.
THE RIVER BASIN IS: York
THE SECTION NUMBER IS: 3
THE CLASSIFICATION IS: III

STANDARDS VIOLATED (Y/N) = N
STANDARDS APPROPRIATE (Y/N) = Y

DISCHARGE WITHIN 3 MILES (Y/N) = N

THE DISCHARGE BEING MODELED IS: 605 Village MHP

PROPOSED DRY SEASON LIMITS ARE:
FLOW = .04 MGD
CBOD5 = 7.5 MG/L
TKN = 3.5 MG/L
D.O. = 6.5 MG/L

PROPOSED WET SEASON LIMITS:
FLOW = 0.04 MGD
CBOD5 = 23 mg/L
TKN = 3.5 mg/L
D.O. = 6.5 mg/L

THE NUMBER OF SEGMENTS TO BE MODELED = 3

7Q10 WILL BE CALCULATED BY: DRAINAGE AREA COMPARISON
THE GAUGE NAME IS: DEQ eval
GAUGE DRAINAGE AREA = .58 SQ.MI.
GAUGE 7Q10 = .003 MGD
DRAINAGE AREA AT DISCHARGE = 0 SQ.MI.

STREAM A DRY DITCH AT DISCHARGE (Y/N) = Y
ANTIDEGRADATION APPLIES (Y/N) = Y

ALLOCATION DESIGN TEMPERATURE = 20 °C summer
15 °C winter

SEGMENT INFORMATION

####### SEGMENT # 1 #######

SEGMENT ENDS BECAUSE: OF A PHYSICAL CHANGE IN STREAM

SEGMENT LENGTH = .7 MI

SEGMENT WIDTH = 2 FT
SEGMENT DEPTH = .2 FT
SEGMENT VELOCITY = .4 FT/SEC

DRAINAGE AREA AT SEGMENT START = 0 SQ.MI.
DRAINAGE AREA AT SEGMENT END = .58 SQ.MI.

ELEVATION AT UPSTREAM END = 410 FT
ELEVATION AT DOWNSTREAM END = 340 FT

THE CROSS SECTION IS: IRREGULAR
THE CHANNEL IS: MODERATELY MEANDERING

POOLS AND RIFFLES (Y/N) = Y
THE SEGMENT LENGTH IS 80 % POOLS
POOL DEPTH = .2 FT
THE SEGMENT LENGTH IS 20 % RIFFLES
RIFFLE DEPTH = .1 FT

THE BOTTOM TYPE = SMALL ROCK
SLUDGE DEPOSITS = NONE
AQUATIC PLANTS = NONE
ALGAE OBSERVED = NONE
WATER COLORED GREEN (Y/N) = N

SEGMENT INFORMATION

####### SEGMENT # 2 #######

SEGMENT ENDS BECAUSE: OF A PHYSICAL CHANGE IN STREAM

SEGMENT LENGTH = .4 MI

SEGMENT WIDTH = 2.5 FT
SEGMENT DEPTH = .3 FT
SEGMENT VELOCITY = .4 FT/SEC

DRAINAGE AREA AT SEGMENT START = .58 SQ.MI.
DRAINAGE AREA AT SEGMENT END = 1.6 SQ.MI.

ELEVATION AT UPSTREAM END = 340 FT
ELEVATION AT DOWNSTREAM END = 325 FT

THE CROSS SECTION IS: IRREGULAR
THE CHANNEL IS: MODERATELY MEANDERING

POOLS AND RIFFLES (Y/N) = Y
THE SEGMENT LENGTH IS 80 % POOLS
POOL DEPTH = .3 FT
THE SEGMENT LENGTH IS 20 % RIFFLES
RIFFLE DEPTH = .2 FT

THE BOTTOM TYPE = GRAVEL
SLUDGE DEPOSITS = NONE
AQUATIC PLANTS = NONE
ALGAE OBSERVED = NONE
WATER COLORED GREEN (Y/N) = N

SEGMENT INFORMATION

####### SEGMENT # 3 #######

SEGMENT ENDS BECAUSE: THE MODEL ENDS

SEGMENT LENGTH = 1 MI

SEGMENT WIDTH = 3 FT
SEGMENT DEPTH = .3 FT
SEGMENT VELOCITY = .4 FT/SEC

DRAINAGE AREA AT SEGMENT START = 1.6 SQ.MI.
DRAINAGE AREA AT SEGMENT END = 2.9 SQ.MI.

ELEVATION AT UPSTREAM END = 325 FT
ELEVATION AT DOWNSTREAM END = 295 FT

THE CROSS SECTION IS: IRREGULAR
THE CHANNEL IS: MODERATELY MEANDERING

POOLS AND RIFFLES (Y/N) = Y
THE SEGMENT LENGTH IS 90 % POOLS
POOL DEPTH = .3 FT
THE SEGMENT LENGTH IS 10 % RIFFLES
RIFFLE DEPTH = .1 FT

THE BOTTOM TYPE = SILT
SLUDGE DEPOSITS = NONE
AQUATIC PLANTS = NONE
ALGAE OBSERVED = NONE
WATER COLORED GREEN (Y/N) = N

****

REGIONAL MODELING SYSTEM Ver 3.2 (OWRM - 9/90)
03-02-1999 10:51:05

DRY SEASON

********** ********** **********

REGIONAL MODELING SYSTEM VERSION 3.2

****

MODEL SIMULATION FOR THE 605 Village MHP DISCHARGE

TO South Anna, U.T.

THE SIMULATION STARTS AT THE 605 Village MHP DISCHARGE

********** PROPOSED PERMIT LIMITS **********

FLOW = .04 MGD cBOD5 = 7.5 Mg/L TKN = 3.5 Mg/L D.O. = 6.5 Mg/L

**** THE MAXIMUM CHLORINE ALLOWABLE IN THE DISCHARGE IS 0.011 Mg/L ****

THE SECTION BEING MODELED IS BROKEN INTO 3 SEGMENTS
RESULTS WILL BE GIVEN AT 0.1 MILE INTERVALS

********** BACKGROUND CONDITIONS **********

THE 7Q10 STREAM FLOW AT THE DISCHARGE IS 0.00000 MGD
THE DISSOLVED OXYGEN OF THE STREAM IS 8.080 Mg/L
THE BACKGROUND cBODu OF THE STREAM IS 5 Mg/L
THE BACKGROUND nBOD OF THE STREAM IS 0 Mg/L

********** MODEL PARAMETERS **********

SEG.	LEN. Mi	VEL. F/S	K2 1/D	K1 1/D	KN 1/D	BENTHIC Mg/L	ELEV. Ft	TEMP. °C	DO-SAT Mg/L
1	0.70	0.469	20.000	1.000	0.350	0.000	375.00	20.00	8.977
2	0.40	0.455	20.000	1.000	0.300	0.000	332.50	20.00	8.991
3	1.00	0.479	18.000	1.000	0.250	0.000	310.00	20.00	8.998

(The K Rates shown are at 20°C ... the model corrects them for temperature.)

********** RESPONSE FOR SEGMENT 1 **********

TOTAL STREAMFLOW = 0.0400 MGD
(Including Discharge)

DISTANCE FROM HEAD OF SEGMENT (MI.)	TOTAL DISTANCE FROM MODEL BEGINNING (MI.)	DISSOLVED OXYGEN (Mg/L)	cBODu (Mg/L)	nBODu (Mg/L)
0.000	0.000	6.500	18.750	2.165
0.100	0.100	6.846	18.507	2.155
0.200	0.200	7.115	18.268	2.145
0.300	0.300	7.326	18.031	2.135
0.400	0.400	7.491	17.798	2.126
0.500	0.500	7.620	17.567	2.116
0.600	0.600	7.723	17.340	2.106
0.700	0.700	7.805	17.115	2.097

FLOW FROM INCREMENTAL DRAINAGE AREA = 0.0030 MGD

********** RESPONSE FOR SEGMENT 2 **********

TOTAL STREAMFLOW = 0.0430 MGD
(Including Discharge, Tributaries and Incremental D.A. Flow)

DISTANCE FROM HEAD OF SEGMENT (MI.)	TOTAL DISTANCE FROM MODEL BEGINNING (MI.)	DISSOLVED OXYGEN (Mg/L)	cBODu (Mg/L)	nBODu (Mg/L)
0.000	0.700	★ 7.824 ★	16.270	1.951
0.100	0.800	7.902	16.053	1.943
0.200	0.900	7.964	15.839	1.935
0.300	1.000	8.013	15.628	1.927
0.400	1.100	8.054	15.419	1.919

FLOW FROM INCREMENTAL DRAINAGE AREA = 0.0053 MGD

★ D.O. ANTI-DEG. BASELINE

********** RESPONSE FOR SEGMENT 3 **********

TOTAL STREAMFLOW = 0.0483 MGD
(Including Discharge, Tributaries and Incremental D.A. Flow)

DISTANCE FROM HEAD OF SEGMENT (MI.)	TOTAL DISTANCE FROM MODEL BEGINNING (MI.)	DISSOLVED OXYGEN (Mg/L)	cBODu (Mg/L)	nBODu (Mg/L)
0.000	1.100	8.058	14.281	1.710
0.100	1.200	8.084	14.100	1.704
0.200	1.300	8.098	13.921	1.699
0.300	1.400	8.098	13.744	1.694
0.400	1.500	8.098	13.570	1.688
0.500	1.600	8.098	13.398	1.683
0.600	1.700	8.098	13.228	1.677
0.700	1.800	8.098	13.060	1.672
0.800	1.900	8.098	12.895	1.667
0.900	2.000	8.098	12.731	1.661
1.000	2.100	8.098	12.570	1.656

****

REGIONAL MODELING SYSTEM Ver 3.2 (OWRM - 9/90)
03-05-1999 09:05:05

DATA FILE = NEW605S2.MOD

****

REGIONAL MODELING SYSTEM VERSION 3.2

****

MODEL SIMULATION FOR THE 605 Village MHP DISCHARGE

TO South Anna, U.T.

SEASONAL LIMITS RUN - - WET SEASON PERIOD: November TO April

THE SIMULATION STARTS AT THE 605 Village MHP DISCHARGE

********** PROPOSED PERMIT LIMITS **********

FLOW = .04 MGD cBOD5 = 23 Mg/L TKN = 3.5 Mg/L D.O. = 6.5 Mg/L

**** THE MAXIMUM CHLORINE ALLOWABLE IN THE DISCHARGE IS 0.011 Mg/L ****

THE SECTION BEING MODELED IS BROKEN INTO 3 SEGMENTS
RESULTS WILL BE GIVEN AT 0.1 MILE INTERVALS

********** BACKGROUND CONDITIONS **********

THE WET SEASON 7Q10 STREAM FLOW
  AT THE DISCHARGE IS 0.00000 MGD
THE DISSOLVED OXYGEN OF THE STREAM IS 8.936 Mg/L
THE BACKGROUND cBODu OF THE STREAM IS 5 Mg/L
THE BACKGROUND nBOD OF THE STREAM IS 0 Mg/L

********** MODEL PARAMETERS **********

SEG.	LEN. Mi	VEL. F/S	K2 1/D	K1 1/D	KN 1/D	BENTHIC Mg/L	ELEV. Ft	TEMP. °C	DO-SAT Mg/L
1	0.70	0.469	20.000	1.400	0.350	0.000	375.00	15.00	9.929
2	0.40	0.455	20.000	1.400	0.300	0.000	332.50	15.00	9.944
3	1.00	0.479	18.000	1.400	0.250	0.000	310.00	15.00	9.952

(The K Rates shown are at 20°C ... the model corrects them for temperature.)

********** RESPONSE FOR SEGMENT 1 **********

TOTAL STREAMFLOW = 0.0400 MGD
(Including Discharge)

DISTANCE FROM HEAD OF SEGMENT (MI.)	TOTAL DISTANCE FROM MODEL BEGINNING (MI.)	DISSOLVED OXYGEN (Mg/L)	cBODu (Mg/L)	nBODu (Mg/L)
0.000	0.000	6.500	57.500	2.165
0.100	0.100	6.464	56.672	2.158
0.200	0.200	6.446	55.857	2.152
0.300	0.300	6.442	55.053	2.145
0.400	0.400	6.449	54.260	2.138
0.500	0.500	6.465	53.479	2.132
0.600	0.600	6.488	52.709	2.125
0.700	0.700	6.516	51.951	2.118

FLOW FROM INCREMENTAL DRAINAGE AREA = 0.0540 MGD

********** RESPONSE FOR SEGMENT 2 **********

TOTAL STREAMFLOW = 0.0940 MGD
(Including Discharge, Tributaries and Incremental D.A. Flow)

DISTANCE FROM HEAD OF SEGMENT (MI.)	TOTAL DISTANCE FROM MODEL BEGINNING (MI.)	DISSOLVED OXYGEN (Mg/L)	cBODu (Mg/L)	nBODu (Mg/L)
0.000	0.700	7.906	24.979	0.901
0.100	0.800	8.007	24.609	0.899
0.200	0.900	8.091	24.244	0.896
0.300	1.000	8.162	23.884	0.894
0.400	1.100	8.223	23.530	0.892

★ ANTIDEGRADATION IS VIOLATED IN THIS SEGMENT

FLOW FROM INCREMENTAL DRAINAGE AREA = 0.0950 MGD

★ ANTIDEG. NOT VIOLATED BECAUSE 7.906 mg/l D.O. is WITHIN 0.2 mg/L OF THE BACKGROUND D.O. IN THE DRY SEASON MODEL.

********** RESPONSE FOR SEGMENT 3 **********

TOTAL STREAMFLOW = 0.1890 MGD
(Including Discharge, Tributaries and Incremental D.A. Flow)

DISTANCE FROM HEAD OF SEGMENT (MI.)	TOTAL DISTANCE FROM MODEL BEGINNING (MI.)	DISSOLVED OXYGEN (Mg/L)	cBODu (Mg/L)	nBODu (Mg/L)
0.000	1.100	8.588	14.218	0.444
0.100	1.200	8.658	14.017	0.442
0.200	1.300	8.717	13.820	0.442
0.300	1.400	8.767	13.625	0.440
0.400	1.500	8.811	13.433	0.440
0.500	1.600	8.850	13.243	0.438
0.600	1.700	8.883	13.057	0.438
0.700	1.800	8.913	12.873	0.437
0.800	1.900	8.940	12.691	0.436
0.900	2.000	8.957	12.512	0.435
1.000	2.100	8.957	12.336	0.434

ANTIDEGRADATION IS VIOLATED IN THIS SEGMENT

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REGIONAL MODELING SYSTEM Ver 3.2 (OWRM - 9/90)
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DATA FILE = FINAL605.MOD

ATTACHMENT 11

Public Notice

Public Notice – Environmental Permit

PURPOSE OF NOTICE: To seek public comment on a draft permit from the Department of Environmental Quality that will allow the release of treated wastewater into a water body in Louisa County, Virginia.

PUBLIC COMMENT PERIOD: March 14, 2014 to April 14, 2014

PERMIT NAME: Virginia Pollutant Discharge Elimination System Permit – Wastewater issued by DEQ, under the authority of the State Water Control Board

APPLICANT NAME, ADDRESS AND PERMIT NUMBER: Six-0-Five Mobile Home Group LLC
P.O. Box 70367, Richmond, VA 23255
VA0090140

NAME AND ADDRESS OF FACILITY: Six-0-Five Mobile Home Park Sewage Treatment Plant
Off Route 605, 0.3 miles NE of US 33, Louisa County, VA

PROJECT DESCRIPTION: Six-0-Five Mobile Home Group LLC has applied for a reissuance of a permit for the private Six-0-Five Mobile Home Park STP. The applicant proposes to release treated sewage wastewaters from residential areas at a rate of 0.040 million gallons per day into a water body. Sludge from the treatment process will be pumped and hauled to the Little Falls Run WWTF (VA0076392) for further treatment and final disposal. The facility proposes to release the treated sewage in an unnamed tributary to the South Anna River in Louisa County in the York River watershed. A watershed is the land area drained by a river and its incoming streams. The permit will limit the following pollutants to amounts that protect water quality: pH, carbonaceous-biochemical oxygen demand, total suspended solids, dissolved oxygen, ammonia and E. coli.

HOW TO COMMENT AND/OR REQUEST A PUBLIC HEARING: DEQ accepts comments and requests for public hearing by hand-delivery, email, fax or postal mail. All comments and requests must be in writing and be received by DEQ during the comment period. Submittals must include the names, mailing addresses and telephone numbers of the commenter/requester and of all persons represented by the commenter/requester. A request for public hearing must also include: 1) The reason why a public hearing is requested. 2) A brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requester, including how and to what extent such interest would be directly and adversely affected by the permit. 3) Specific references, where possible, to terms and conditions of the permit with suggested revisions. A public hearing may be held, including another comment period, if public response is significant, based on individual requests for a public hearing, and there are substantial, disputed issues relevant to the permit.

CONTACT FOR PUBLIC COMMENTS, DOCUMENT REQUESTS AND ADDITIONAL INFORMATION: The public may review the draft permit and application at the DEQ-Northern Regional Office by appointment, or may request electronic copies of the draft permit and fact sheet.

Name: Douglas Frasier
Address: DEQ-Northern Regional Office, 13901 Crown Court, Woodbridge, VA 22193
Phone: 703-583-3873 Email: Douglas.Frasier@deq.virginia.gov Fax: 703-583-3821